# The Business Guide

*by* J. L. NICHOLS, A. M.

## AN OUTLINE OF BUSINESS

GIVING you (1) the basic principles of business success, (2) the essentials of commercial law, (3) handy forms for business and legal papers, (4) sure fire methods of rapid calculation, (5) interest tables for daily use, (6) boiled down rules for business men, builders, mechanics, appraisers, printers, and farmers, (7) dozens of useful ready reference tables.

THE BUSINESS GUIDE HAS BEEN TRULY CALLED "A COMPLETE BUSINESS LIBRARY IN A SINGLE VOLUME"

Homer B. Ashcraft.
1930

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## An Outline of Business

BY

J. L. NICHOLS, A. M.

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Author of The Farmers Manual, The Household Guide, Safe Counsel, The Busy Man's Friend, Etc.

Eighty-Ninth Edition

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# PREFACE

THE BUSINESS GUIDE contains cold blooded business data, boiled down legal information, proven methods for making money and saving money and innumerable rules, formulæ, statistics, forms, diagrams, facts and figures for ready reference.

Fundamentally, therefore, it is not a volume of romance or mystery, although where will you find more of romance or mystery than in a successful business career?

It is rather a book for occasional study and for convenient reference in the home, on the farm or at the office or factory.

In its forty years of service THE BUSINESS GUIDE has solved the business problems of millions of readers. Originally it was the crowning achievement of a poor orphaned immigrant who in an incredibly short time rose to a professorship in an American College and attained a high rank among successful business men. Today it is the product of many minds, well known attorneys, captains of Industry, statistical organizations, educational institutions and government bureaus.

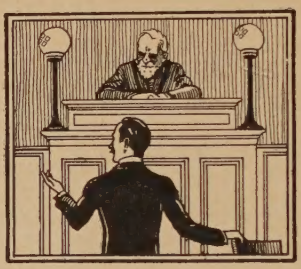
THE EDITOR.

SECTION 1

# Law for the Layman

*"Ask me a point of law, and I will answer it."*

Explanation of Terms — Acknowledgements — Adopted Child — Affidavits—Agency—Agreement to Purchase Land —Assignments — Auctioneer — Automobile—Bailment--Bankruptcy—Beneficial Associations—Bonds—Broker—Carriers — Chattel Mortgages — Citizenship—Commercial Paper—Common Law Trusts —Contracts — Copyright—Corporations — Criminal Law — Deeds — Dower — Drunkenness—Employer and Employee --Equitable Remedies — Exemptions — Guarantees—Husband and Wife — Innkeeper — Insurance— International Law —License — Liens — Lease— Legal Remedies—Mortgage — Municipal Corporations — Notaries Public — Parent and Child — Parliamentary Law — Partnership — Passport — Patent — Payment — Prescriptive Rights — Professessional Men—Sale—Shipping—Statutes of Limitation—Torts—Trade Mark —Vicious Animals — Will — Business and Legal Forms for Practical Use.



## EXPLANATION

A BUSINESS man should know some law, not because he wants to be a lawyer, but because he must understand his relation to others in order to carry on his business intelligently.

The following legal department has been prepared in simple form. The information is accurate, brief, and reliable. Its purpose is to prevent unnecessary suits and expensive litigation. It will settle disputes and end arguments. And in emergencies, when the loss of an hour or so a day may mean the loss of hundreds of dollars, it will enable the layman to draw up the required legal documents, quickly and correctly.

## EXPLANATION OF TERMS

1. **Definition of Terms.**—**Statute** refers to the laws passed by Congress and the several State Legislatures. The term **common law** refers to that body of law and jurisprudence which was originated, developed, and formulated, and is administered, in England, and has been adopted among and by the United States. An **action** is a suit or case which one party brings against another in court.

2. **Common Law.**—In a large measure the common law establishes the rules and regulations under which we live. Legal decisions are precedents which must be followed in other cases of the same general nature. The lower courts must follow the findings of the higher courts; the State courts are bound to follow the decision of the Federal Courts; but the courts in one State are not bound by the decisions of a court in another State. Of course, the common law decision may be set aside by statute or modified when it no longer applies to present conditions.

3. **Law and Equity.**—These two terms appear frequently in the following pages and are quite generally misunderstood. The word **law** signifies a rule of action, either written or unwritten. **Equity** rather looks to the substance than to the form. When an act is **equitable** it is just even though it has no foundation in the law. Formerly separate courts existed to try cases in equity. The modern tendency is to combine law and equity and to give judges the power to try both law and equity cases. (See **legal remedies** and **equitable remedies.**)

4. **Civil Law and Criminal Law.**—The difference between civil and criminal law is not always understood. Criminal law may be defined as the law dealing with offenses against the people and is founded on the statutes. The acts that are crimes are clearly defined and the cases are prosecuted by public officers. Civil law takes in all law not penal in its nature. Wrongful acts may be subject to both criminal and civil actions. If a man steals a horse, he has committed a crime against the State, or public policy, and at the same time the person robbed has a civil action against him for the loss. (See **Torts.**)

5. **Classes of Courts.**—There are three kinds of courts in

MAKING A PLEA IN A KING'S COURT IN THE MIDDLE AGES.

each of the States. The first are the courts which have jurisdiction over petty criminal offenses and in which minor suits are brought. Second, there are the courts in which more important suits are brought and in which decisions in the lower courts are reviewed. And finally, there is the Supreme Court, or court of last resort, which reviews the decisions of the lower courts.

6. **An example.**—Of course the judicial system varies widely in the different States. The Illinois law provides for Justice of the Peace Courts in which minor cases are tried. Next comes the County Court, one in each county. Then there is the Circuit Court comprised of three judges who can sit in any of the courts in their circuit. Following the Circuit Court comes the State Appellate Court, or Court of Appeals, and at the top the State Supreme Court. Besides these courts, the larger Counties have special courts to hear probate cases and the like. Cities with a populaton of 50,000 or more have municipal courts with jurisdiction over cases confined to the city, and the criminal courts establish branches called police courts. Many States have only two classes of courts, lower and higher.

7. **Federal Courts.**—There are also three classes of Federal Courts. The lowest is called the District Court, taking its name from the fact that the country as a whole is divided into districts with one court for each district. Next is the Appellate Court to which appeals from the District Court are taken. And finally, there is the United States Supreme Court in which appeals may be sought from decisions of the Appellate Courts and from the Supreme Courts of the several States. After an application is made in proper form this court decides whether or not it will review the case.

8. **Basis of Appeals.**—No court will review the decision of a lower court unless the application is founded on errors in the former proceedings. Thus the proof of wrongful admission of or refusal to admit evidence in the former trial would be sufficient to grant a rehearing.

9. **Evidence.**—Evidence includes all means and ways by which the truth of an alleged fact is established or disproved. **Legal evidence** is direct testimony of a witness or written documents and records, which are competent, relevant, and material to the issues joined. **Circumstantial** evidence

is a chain of facts or circumstances, all tending, when connected up, to establish a logical inference or conclusion.

**10. The Reason for Laws.**—In the beginning there was no law save that of brute strength or the survival of the fittest. A man had to protect his person and his property by force. Common dangers threatened and men banded themselves together, vesting all law making powers to the tribal chiefs. Gradually the evolution proceeded until today we have a system of laws of the people, for the people and by the people, making all men equal in their rights and duties.

## ACKNOWLEDGMENT FOR DEEDS, MORTGAGES, ASSIGNMENTS OF MORTGAGES AND RELEASES

Deeds, mortgages, assignments of mortgages, and releases must all be acknowledged before a proper officer. The certificate is made by an officer authorized to take acknowledgments and pertains to the parties signing the instrument.

### Form 1, for Chattel Mortgages

STATE OF ILLINOIS, }
KANE COUNTY } ss.

I, John Richard, a Justice of the Peace in the Town of Dundee, in and for the said County, do hereby certify that this mortgage was duly acknowledged before me by the above named....., the grantor therein named, and entered by me this 17th day of July, 19....

Witness my hand and seal.
(Seal)

JOHN RICHARD,
Justice of the Peace.

### Form 2, for Assignments and Releases

STATE OF ILLINOIS, }
COUNTY OF DU PAGE } ss.

I, John Smith, a Notary Public in and for said County, and in the State aforesaid do hereby certify that James Y. Scammon, who is personally known to me to be the same person whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that he signed, sealed and delivered the said instrument as his free and voluntary act for the uses and purposes therein set forth.

Given under my hand and Notarial Seal this 13th day of May, 19....
(Notarial Seal)

JOHN SMITH,
Notary Public.

### Form 3, for Mortgages and Deeds

STATE OF ILLINOIS, }
COUNTY OF DU PAGE } ss.

I, John Smith, a Notary Public in and for said County in the State aforesaid, do hereby certify that Samuel P. Smith and Sarah E. Smith,

his wife, who are personally known to me to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that they signed, sealed, and delivered said instrument as their free and voluntary act for the uses and purposes therein set forth, including a release and waiver of all rights under and by virtue of the homestead exemption laws of this State.

Given under my hand and Notarial Seal this first day of January, A. D. 19....

(Notarial Seal)

JOHN SMITH,
Notary Public.

### Form 4, General and Short Form

STATE OF.....,
COUNTY OF.....,
} ss.

On the.....day of.....in the year one thousand nine hundred and ....., before me personally came (name of both parties), who are known to me to be the individuals described in, and who executed the foregoing instrument, and acknowledged that they executed the same.

(Signature.)

## ADOPTED CHILD

1. **Definition.**—Adoption is making the child of another, one's own child as far as it is possible under the law. Any child whether its parents are living or not may be adopted. If the parents are living they lose all personal rights and

EVERY CHILD SHOULD HAVE A MOTHER'S CARE.

are relieved from all legal duties. The adopting parents acquire the right to the adopted child's custody, services, and earnings, and must support and educate him.

2. **Method of Adoption.**—The formalities of adoption are different in most of the states, but application is usually made to the County Judge. The child cannot be adopted without the consent of the parents, but once given, the consent cannot be revoked. If the child is over 14 years of age his consent is also necessary.

3. **Inheritance in Cases of Adoption.**—In most states an adopted child acquires all the legal rights of a natural child. He can also inherit from his natural parent and kindred exactly as though he had not been adopted. There are some exceptions to these rules. (See **Parent and Child; Husband and Wife.**)

## Agreement for the Adoption of Children

This indenture made the.....day of....., 19...., between.....of ....., party of the first part, and....., of ....., and..... his wife, parties of the second part,

Whereas the said party of the first part has two daughters,..... .....and ....., now aged..... and..... years, respectively; and whereas the said parties of the second part are willing to adopt the said children subject to the conditions hereinafter contained, and on the part of the party of the first part to be observed: Now this indenture witnesseth that the said parties covenant and agree as follows, that is to say:

1. The said parties of the second part shall adopt the said children, and shall, until the said children shall respectively attain the age of twenty-one years, or marry under that age, maintain, board, lodge, clothe, and educate them in a manner suitable to their station, and as if they were the lawful children of the parties of the second part and shall at the cost of the parties of the second part, and of the survivor of them, provide the said children with all necessaries, and discharge all the debts and liabilities which the said children or either of them may incur for necessaries, and indemnify the said party of the first part against all actions, claims, and demands in respect thereof.

2. The said party of the first part hereby nominates and appoints the said parties of the second part, during their lives, and after their respective deaths the person or persons to be nominated in that behalf, as is hereinafter mentioned, to be the guardians of the persons and estates of the said children until they shall attain the age of twenty-one years, or until they shall marry under that age respectively.

3. The said party of the first part shall not revoke the appointment hereby expressed to be made, and will not, by deed, will, or otherwise, appoint or apply for the appointment of any other person or persons to be guardian or guardians of the said children or either of them, or of their respective estates.

4. In case of the death of either of the parties of the second part before the said children shall attain the age of twenty-one years, or marry under that age respectively, it shall be lawful for the survivor of them, the said parties of the second part, by deed or will, to nominate and appoint any person or persons, from and after the decease of such survivor, to be guardian or guardians of the said children or either of them.

5. The said party of the first part shall not himself, nor shall any person or persons claiming under him, or acting under his authority, at any time or in any manner interfere with the training or management of the said children or either of them, or with their or her moral, intellectual, or religious education or instruction.

6. If the said party of the first part shall not perform and observe all and every of the stipulations herein contained and on his part to be performed and observed, then and in every such case it shall be lawful for the said parties of the second part, and the survivor of them, by notice in writing under their, his or her hands or hand, and addressed either to the party of the first part or to the person setting up such claim or demand, or so interfering as aforesaid, to put an end to the agreement hereby expressed to be made, and there-upon the same shall absolutely cease and determine; provided that in such event the said party of the first part, or his estate, shall be liable to pay and satisfy all debts and liabilities incurred by or in any wise for the benefit of the said children, or either of them, which at the time of such determination of this agreement shall not have been paid and satisfied. In witness, etc.

## Release by Ward of His Guardian

Know all men by these presents, that I, A. B., of....., son and heir of....., deceased, in consideration of ....., by these presents remise, release, and forever discharge C. D., of....., my guardian, of and from all manner of actions, suits, accounts, debts, dues, and demands whatsoever, which I ever had, now have, or which I or my executors or administrators, at any time hereafter, can or may have, claim or demand against the said C. D., his executors or administrators, for, touching, or concerning the management and disposition of any of the lands, tenements, or hereditaments of the said A. B., situate, etc., or any part thereof, or for or by reason of any money, rents, or other profits by him received out of the same, or any payments made thereof, during the minority of the said A. B., or by reason of any matter, cause or thing whatsoever, from the beginning of the world to the day of the date hereof.

In witness whereof, I have hereunto set my hand and seal, this..... .....day of ....., one thousand nine hundred and.....

(Signature and Seal)

.....

In presence of

(Signature of witness)

.....

.....

## AFFIDAVITS

1. **Definition.**—An affidavit is an oath or affirmation made in writing, sworn to or affirmed, before an officer empowered to administer the same. Affidavits are not testimony in courts of law, because the makers are not cross-examined; but a false affiant may be punished for perjury.

2. **Form.**—The following is a common form, and with certain modifications can be made to apply to almost any case:

### Common Form of Affidavit

STATE OF ILLINOIS, } ss.
COUNTY OF HENRY. }

John Jones being duly sworn on his oath states that he is well acquainted with the handwriting of Daniel Seitz one of the subscribing witnesses to the deed hereto attached; that affiant has frequently seen him write and knows his signature; that he believes that the name of the said Daniel Seitz, signed in the said deed, is in the handwriting of the said Daniel Seitz, and further affiant says not.

(Signed)
JOHN JONES

Subscribed and sworn to before me this 28th day of February, A. D. 19....

E. M. SCHWARTZ,
Notary Public.

### A Form Attached to a Declaration of Any Kind

STATE OF ILLINOIS, } ss.
COUNTY OF COOK. }

Chicago, Feb. 28, 19....

The above named John Saylor personally appeared before me and made oath that the following declaration by him subscribed is true.

L. B. Lawson, Justice of the Peace.

## AGENCY

1. **Definitions.**—Agency is the relation between two or more persons by which one person (the agent) represents another (the principal) in the transaction of lawful acts or business. Agents are of two kinds, general and special. **A General Agent** is authorized to represent the principal in all of his business, or in all business of a particular kind just as the principal himself would do. A **Special Agent** is authorized to do a specific thing, to sell a farm, buy a house, or to transact some special business for the principal.

2. **Who May Act as Principal and Agent.**—Any person who is able to act for himself, may act as principal. This excludes a lunatic, an infant, or an alien enemy, or any other person incapable of contracting. On the other hand any person who is competent to act in his own right, and who is of sound mind and understanding, may act as an agent. Husband and wife may act for each other, except where prevented by the statutes of the particular State. A person unable to contract on his own account, such as a person under age, may sometimes act as an agent. Anyone except a lunatic, imbecile, or infant of tender years may be an agent. Corporations often act for others.

**3. Authority, How Given.**—The authority of an agent may be constituted in three ways: By deed under seal, by writing, or by mere word. Express authority is given to an agent by what is called a power of attorney. If the authority is to execute a writing, under seal and acknowledged. the power of attorney must be likewise under seal and acknowledged. An agent to sell land, or to do any important business, where he is required to make contracts, draw or sign notes, drafts or checks, should be appointed by "power of attorney." If an agency is proved without its extent being shown it will be presumed to be a general agency. The acts of a general agent will bind the principal, even though he had no authority to do them, provided he acts in the general scope of the business which he was authorized to transact. If a special agent exceeds his authority, the principal is not bound, but if a general agent exceeds his authority the principal is bound, provided the agent acted within the ordinary and usual scope of the business he was authorized to transact, and the party dealing with him did not know he was exceeding his authority. Agency may be implied from previous dealings and transactions between the parties. If the principal has held a person out as an agent he will be bound by his acts, even though as a matter of fact the agent had no authority to represent him. The acts or contracts of an agent made beyond the scope of his authority may be ratified by the principal and when so ratified are binding on the latter.

**4. Agent's Responsibility.**—An agent concealing his principal is himself responsible, and if acting fraudulently or deceitfully is himself responsible to third parties. He cannot appoint a substitute or delegate his authority to another, without consent of his principal. If an agent embezzles his principal's property it may be reclaimed if it can be identified or distinctly traced. An agent employed to sell property cannot buy it himself, or if employed to purchase property, cannot buy from himself.

**5. Principal's Liability.**—The principal is liable to the third person for the negligence or unskillfulness of the agent, when he is acting in the fulfillment of the agency business. The principal is liable for all acts of his agent within the scope of his agency, but money paid by an agent can be recovered by the principal, if it has been paid by mistake. The knowledge of the agent relating to the business of the

agency is binding upon the principal, and notice to an agent as to matters relating to the agency is notice to the principal.

6. **Authority May Be Revoked.**—The authority of an agent may be terminated: First, by the express revocation thereof by the principal. Second, by renunciation of such power by the agent. Third, by the death of the principal, which also revokes the agency. Fourth, by the expiration of the time within which the agent was to perform the acts which were to be done by him, or by him having completed and fully performed the commission and closed the business which he was to transact. Fifth, by the sale of the subject matter of the agency. Sixth, by the insanity of either principal or agent. A revocation of authority takes effect, so far as the agent is concerned when he receives notice thereof; so far as the third persons are concerned when they receive notice of such revocation. Personal notice or its equivalent is required, and is sufficient to those who have dealt with the agent. Advertising the fact would be sufficient as to all others. Without a sufficient notice of the revocation, a contract made in good faith with the agent after revocation will bind the principal the same as before.

7. **Special Rules of Agency.**—An agent cannot delegate his powers to another without the consent of the principal, unless the act to be done is a minor service, or one requiring no personal ability or skill. Both principal and agent are liable if the persons with whom the agent is transacting business do not know of the agency relationship. An agent can receive no personal profit from a transaction.

8. **Caution.**—Persons dealing with agents who are strangers should be very careful to ascertain that the agent has authority to transact the business in hand. In all transactions in regard to real estate the authority of the agent should be in writing, signed by the owner of the property, in order to be binding upon him. In all cases of doubt as to the authority of an agent or the extent of his authority, it would be wise to require of the agent a written proof of his agency and the extent of his authority.

9. **Power of Attorney.**—To delegate to an agent the power to sign notes, checks, and other legal documents, as well as to transact any business where such documents are necessary, is called power of attorney—that is, the power

to be attorney for you. Such power or authority should be given in writing. It should be witnessed and should state clearly what the attorney has power to do.

## Power of Attorney, General Form

KNOW ALL MEN BY THESE PRESENTS, That I, James L. Binton, of Naperville, County of Du Page, and State of Illinois, have made, constituted and appointed, and BY THESE PRESENTS do make, constitute and appoint, Chas. A. Lerch true and lawful attorney for me and in my name, place and stead, (here state the purpose for which the power is given), giving and granting unto my said attorney full power and authority to do and perform all and every act and thing whatsoever, requisite and necessary to be done in and about the premises, as fully, to all intents and purposes, as I might or could do if personally present, with all power of substitution and revocation, hereby ratifying and confirming all that my said attorney or his substitute shall lawfully do or cause to be done by virtue thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the 2nd day of January, one thousand nine hundred twenty.....

Signed, Sealed and Delivered
in Presence of
.....

JAMES L. BINTON. (Seal.)

To be properly acknowledged before an officer, the same as a deed according to the law of the State.

## Proxy or Power of Attorney to Vote

Know all men by these presents: That I, David E. Hughes, do hereby constitute and appoint C. A. Brown my true and lawful attorney, for me and in my name, place and stead, to vote as my proxy and representative at the.....meeting of the stockholders of the ....., a corporation, and at any adjournment of said meeting, all of the.....shares of the capital stock of said corporation standing in my name on the books of said corporation, as fully and amply as I could or might do were I personally present; with full power of substitution and revocation.

Witness my hand and seal at Aurora, Illinois, this 26th day of June, A. D. 192....

E. R. ZEMMER. (Seal.)

N. B. A seal is an impression, or writing (seal), placed at the right of signature confirming authority of same.

## Revoking of Power of Attorney

Whereas, I, Sylvester Jones of Aurora, County of Kane, and State of Illinois, did on the tenth day of June, 192...., by my letter or power of attorney appoint John C. Cook of Chicago my true and lawful attorney, for me and in my name to (here state in precise language what he was authorized to do) as by the said power of attorney, reference thereunto being had, will fully appear;

Therefore, know all men by these presents, That I, Sylvester Jones, aforesaid, have revoked and recalled the said letter of attorney, and by these presents do revoke and recall all power and authority thereby given to the said John C. Cook.

Given this tenth day of October, 192....

Signed and sealed in presence of.....

SYLVESTER JONES. (Seal.)

## AGREEMENT TO PURCHASE LAND

**1. Must be in Writing.**—An agreement to purchase real estate must be in writing, and should be signed by both buyer and seller. The writing need not mention the amount to be paid for the land. It may be signed with a lead pencil or with a rubber stamp. The entire contract need not be on the same sheet of paper, as in cases where agreement to purchase land is completed through correspondence between the two parties.

**2. Exceptions.**—There are some exceptions to this rule. For instance if A sells a piece of property to B and without a written agreement allows B to take possession of the property, the courts will compel A to give B a deed to the property. In other words the law gives B an opportunity to prove that he is not a trespasser but the real owner of the land.

**3. A Common Misunderstanding.**—It is quite generally believed that if a purchaser makes an oral agreement and pays part of the purchase price he can compel the seller to give him a deed to the real estate. This was formerly the rule but the courts abandoned it on account of too frequent frauds. The purchaser can compel the seller to return the advance money.

**4. Options.**—An option is a contract between two parties for the transfer of property or rights. For example A agrees to sell a piece of property to B at a certain price within a certain period of time, for which B gives A a valuable consideration. B must either exercise his option and purchase the property within the time limit, or forfeit his consideration. All options must be in writing. If no time limit is fixed in the agreement, the option must be exercised within a reasonable time.

**5. Tranferring of Title.**—In most real estate contracts the seller agrees to furnish the buyer with a good or merchantable title. That is, he agrees to transfer the property by proper conveyance of a Warranty Deed which warrants the title in him and the buyer against any loss which might be occasioned by defects in the title. All wise purchasers will demand a contract that will require the seller to furnish and deliver a merchantable title. There are four systems used by which this is shown. First, the Abstract system; second, the Title Insurance or Guarantee Policy; third, Certificate

of Title; and fourth, by the Public Registrar Certificate or Torrens system.

**6. The Abstract System** is the one mainly used and is, in fact, in universal use, except in the Pacific Coast states and the cities of the country. An abstract is simply a history or pedigree of the title to the land. The public records are searched and the matters shown therein briefed. An abstract will show all transfers, mortgages, judgments, tax sales, liens of all kinds, court proceedings and everything in fact of record affecting the title to the property. These abstracts are prepared by private concerns or individuals known as abstract companies or abstracters. Getting an abstract, however, does not mean that the purchaser is getting a good title. The abstract is only intended to show the title as of record. To determine whether or not it is good, the purchaser should have the abstract examined by an attorney, competent to pass upon the law of real property. This examination by an attorney will reveal the validity or merchantability of the title. Whatever objections the examiner might find are usually capable of being corrected to his satisfaction without a great deal of delay or expense. This works no hardship on either party, because it is the accepted custom that the seller pays all of the expenses incidental to bringing the abstract down to date and getting the title acceptable to the purchaser's attorney. The purchaser pays the examination fee. The objections to this system are that every attorney who examines the abstract will probably find some objections, but these will have to be accepted as a part of the system, because each examiner has a right to his own personal opinion, as is human nature.

**7. Title Insurance or Guarantee Policy.**—By this system the private title or trust company issues a policy guaranteeing the purchaser against any loss he might sustain by reason of any defect in the title, whether of record or otherwise existing, before or at the time of the issuance of the policy. This system is necessarily becoming more and more popular and in use in the cities because of the demand for facilities to expedite real estate transactions and also because of the protective feature. The formal abstract is not necessary; the purchaser merely makes application for the policy and the title company investigates the title and if reasonably safe issues the policy in a short time. An attorney's examination and opinion with the usual suggestions and requirements to

the title are eliminated. If rank defects are found so that the title company does not want to insure it, they can many times correct them or overcome them in some way, thereby making it possible to close an otherwise impossible deal. These title companies are safe, sound, financial institutions.

**8. Certificates of Title.**—Certificates of title are simply a combination abstract and an attorney's opinion prepared in one act by a title company. The private company simply makes the statement that it has examined the title to a certain property and that the title is in whoever the name of the record owner might be, and if there are any defects in the title, mortgages or liens upon it or unpaid taxes, the certificate immediately enumerates them. The only advantages in a certificate of title over the abstract and attorney's system is that the preparation of a formal abstract with the additional consultation of the examining lawyer is unnecessary. The title company does both.

**9. Torrens System.**—The Torrens System is a system comparable to public title companies. Under this system real estate is tranferred by certificate issued by the County Registrar. It is based upon a court decree which is supposed to define the title and adjudicate or guarantee it down to a certain point. Those depending upon it are supposed to be protected by a fund established from the fees of the offices. However, the system is not applicable to the title laws and property rights of our country; those administering the offices are usually political supports and the fund for protection and payment of losses is usually negligible. It is only used in a few places. It takes a long time to get a title originally registered and takes away the privilege of handling your real estate in privacy.

**(See Deeds).**

## Agreement for Sale of Land

This agreement, entered into this.....day of....., 19...., by and between A. B. and C. D., witnesseth: That said A. B. has this day sold to C. D. the following described tract of land, to-wit: (describe) for the sum of $....., to be paid as hereinafter set forth, and upon the payment of which said A. B. agrees to convey to said C. D. the premises above described, free and clear from all incumbrances, by a deed of general warranty.

And the said C. D. agrees to pay said A. B. for said premises the sum of $....., as follows: $..... with interest at ..... per cent on the .....day of....., 19....;

The said A. B. agrees that said C. D. shall have immediate possession of said premises for the purpose of residence, cultivation, and improvement.

In witness whereof we have hereunto set our hands this..... day of....., 19....

### Form of Option

This agreement, made this.....day of..... 19...., between .....of ....., party of the first part, and ..... of ....., party of the second part, witnesseth:

In consideration of.....dollars, the receipt whereof is hereby acknowledged, the party of the first part hereby agrees to sell to party of the second part, (here insert description of property and price), within.....days from date.

.....days notice of acceptance shall be given by the party of the second part.

In witness, etc.

## AUCTIONEER

1. **Definition.**—An auctioneer is a person employed to sell property to the highest bidder at public sale.

2. **Agent For Both Buyer and Seller.**—An auctioneer is the exclusive agent of the owner until he accepts the purchaser's bid and knocks down the property to him. On accepting the bid the auctioneer becomes the agent of the purchaser also, and thus represents both parties.

3. **When is the Sale Complete.**—A sale by auction is completed when the auctioneer announces its completion by the fall of the hammer, or in any other customary manner. Until such announcement is made, the auctioneer may withdraw the property from sale unless the sale has been advertised to be without reserve. Any bidder may also withdraw his bid at any time before the fall of the hammer.

4. **Responsibility of Auctioneer.**—Authority to sell property does not imply power to sell at auction. Thus a purchaser buying goods from an auctioneer when he knows the auctioneer has no authority to sell them, acquires no title to the property thus purchased. The seller or owner is not bound by any statements by the auctioneer differing from those given to him. An auctioneer is supposed to accept the most favorable bid. He cannot, therefore, refuse to ac-

cept legitimate bids. He is justified in throwing out the bids of insane or drunken persons, minors, trustees of the property, or the bids of persons who refuse to comply with the terms of the sale.

5. **Things An Auctioneer Cannot Do.**—An auctioneer is not allowed to assign his duties to another, except it be in the discharge of minor or incidental duties. He cannot act contrary to the wishes and instructions of the owner, in any matters relating to the details of the sale. He may not permit a bidder to withdraw his bid after its acceptance, without the consent of the owner. He cannot sell the property to himself, nor employ another to bid it in for him. He is not permitted to sell at private sale contrary to the owner's instructions. He should never conceal the name or identity of the owner, otherwise the bidder is not bound.

## AUTOMOBILE

1. **The Right to Use the Highways.**—The public has a right to use the public roads to travel and transport property. Drivers of automobiles have an equal right on the highways with other vehicles, but they do not have any greater right. Each has the same rights and the same restrictions. Again the courts hold that all travelers have an equal right to use the highways. Thus, a pedestrian has the same right as the driver of an automobile. The state cannot exclude non-residents from the public roads, nor place greater restrictions or burdens on non-resident motorists than those imposed on its own citizens.

2. **Parking.**—In the absence of city ordinance or statutory regulation an automobile may be left at the side of the road after shutting off the power and setting the brakes.

3. **License.**—The several states issue licenses to the owners of automobiles, motorcycles and trucks permitting them to use the public highways. Most cities also require a municipal license. Such a license is neither a contract nor a tax. It is simply a privilege, and as such does not pass to a purchaser of the vehicle and may be revoked for any good reason. The driver of an unregistered car is a trespasser on the highway.

4. **The Law on Rented Machines.**—Suppose A rents his automobile to B for a certain consideration. According to

law A is not responsible for the negligent acts of B even if B is an unskilled driver. On the other hand if A knew when he rented the car that B was an immature child or of low mentality, or under the influence of alcohol, the courts would hold him responsible. If the owner lends his car with a chauffeur, he will be held liable for the negligent acts of the chauffeur. This does not apply if the car is loaned without the chauffeur. In case of damage to the rented car, the renter is liable only if it can be proved that he did not exercise ordinary prudence and care. In case of misuse the owner can bring action to repossess himself. Should the renter sell the car without the owner's authority, the owner can recover even from an innocent purchaser. The owner of an automobile is entitled to a fair compensation for its use, even if no definite sum is agreed upon, and he can collect a reasonable hire if his mcahine is used by another without his knowledge or consent. Criminal liability is attached to the unlawful use of another's automobile.

5. **The Speed of Automobiles** along a public road is regulated by law. The State laws prescribe the maximum rates of speed for the business district, residence district and country. A municipality has the right to modify the speed laws in accordance with local requirements. The courts have recently held that any rate of speed which does not endanger the lives of the occupants of the car, or the lives and property of others, is a legal rate of speed.

6. **The Laws of the Road** are intended to prevent collisions and accidents. 1. Vehicles are required to pass each other on the right. If, therefore, two automboiles collide in a street which is wide enough for safe passage, the driver on the wrong side of the road is responsible for the other driver's injury. Where there is no obstuction on the road a driver is permitted to pass on the left hand side. 2. Each driver must pass on his own side of the center of the traveled road. This applies when the road is covered with snow, to side roads, and to roads under construction. 3. It is the duty of every driver to exercise reasonable care in avoiding accidents or injuries to others. This rule applies just as strongly when the driver's machine is on the right side of the road. 4. At street intersections the rights of the travelers are equal but it is usually the custom to allow the right of way to the vehicle approaching from the right. 5. It is the duty of the driver to keep his car under

control at all times. When approaching corners, or when seeing that his machine is frightening a horse, the motorist must slow down, or if necessary stop his car. 6. If one wilfully or negligently drives a car on a street or road at an unlawful speed, thereby killing another, he may be guilty of homicide. 7. The driver of a car may be charged with carelessness if, without warning to others, he changes the course of his direction or backs his machine. A driver may not back his machine on a public road without looking backward.

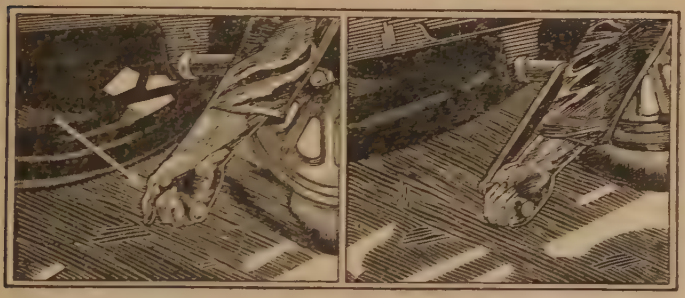
**7.—The Fitness of the Driver.**—The driver of an automobile must be physically and mentally fit. A man who is subject to fainting spells or epileptic attacks has no right to drive a car upon the public highway. The same rule applies to one with defective eyesight. Proper eyeglasses are held to restore the competency of the driver. It is a serious crime to drive an automobile while intoxicated, thereby endangering the lives of others.

**8. The Chauffeur's Liability.**—As a general rule the owner is liable for the acts of his chauffeur, provided the chauffeur is acting within the scope of the owner's business. However, should the chauffeur use the car without the consent or knowledge of the owner, or should he be using it for his own business and with the owner's consent, the owner is not liable for the driver's acts. The same rule applies when the owner's son uses the parent's machine without his knowledge or consent. If the car is run with his knowledge by a member of his family, or for the convenience of other members of the family, the parent is liable for the negligent acts of the driver. Children under 15 are usually forbidden by the State law to drive an automobile. Under the statutory law the husband is not liable for the negligence of his wife while driving an automobile.

**9. License.**—Most states require a chauffeur to take out a license. Even though the license is defective it remains in force until revoked by the proper authority. Thus a chauffeur whose license is defective cannot be held a trespasser on the public highway.

**10. Minor.**—The state statutes forbid minors to drive automobiles. The owner of a car, therefore, who allows a child to operate it, may be held responsible for accident or injury resulting from the child's negligence.

**11. The Chauffeur's Rights.**—A chauffeur may recover damages from his employer for injury received while operating the car, provided that the employer has in some way contributed to the result. On the other hand if his injury was due to a defective part, he could not recover, unless it so happened that the employer knew of the defect and the chauffeur did not. If a chauffeur should be injured while riding in a car driven by the owner, the chauffeur could recover for injuries sustained due to the owner's negligence.



The Wrong Way The Right Way

TO CRANK AN AUTOMOBILE.

**12. Workmen's Compensation Laws.**—These laws provide that a chauffeur who is injured while running his car beyond the speed limit prescribed by statute, can recover nothing, and the statutes disregard the custom of other chauffeurs in this respect. It is generally customary for chauffeurs to travel at between twenty-five to thirty-five miles per hour on the boulevards in our larger cities, although the lawful rate of speed is not in excess of twenty miles per hour. A chauffeur injured under such circumstances cannot hold his employer.

**13. The Owner's Injury.**—If the owner of a car be injured in any way through the wrongful acts or negligence of his chauffeur, the chauffeur may be held liable.

**14. Garage Keeper.**—A garage keeper is a bailee for hire and therefore bound to exercise reasonable care for the property bailed. The owner of a car is not liable for the negligence of the garage keeper or his employees in the care and operation of his automobile. If a garage keeper

or his employee operate an automobile the garage keeper is liable for any damage done to the car or to third persons. A public garage, while not considered a public nuisance, is subject to public regulations as to location, odors, noise and fire hazards. A garage keeper has a lien for a reasonable compensation on an automobile for storage or repairs. He is not liable for fire damage to the automobile unless the fire is caused by his own negligence or that of his employees. He is liable for theft.

**15. Used Automobiles.**—There are two points to keep in mind when purchasing a second hand machine. Such automobiles are usually sold "as is" and the motorist often finds fault when he finds the car is not in perfect running order. If the cylinders prove to be scored or the bearings loose the purchaser has no redress at law. The law presumes that if any warranty was made it would have been reduced to writing in the form of a contract. In the second place there are many instances of sharp practices among the dealers in used automobiles. Frequently the purchaser discovers to his sorrow that the car is stolen or that it is covered by a chattel mortgage. In every case a bill of sale should be demanded and the records searched for incumbrances.

**16. The Bill of Sale** should be drawn in accordance with the laws of the State where the purchase is made. The following form will answer the purpose in most of the States:

### Bill of Sale

"Know all men by these presents that I (here insert name and address of party selling the car) in the county of....., state of..... ....., in consideration of (here insert amount of money to be paid party selling by party buying) dollars this day to me in hand paid, do hereby grant, sell, transfer and deliver unto the said (here insert name of party buying) the following goods and chattels to-wit: (Then insert name of automobile its model, the engine number and the car number, also the type of car, its color, together with any other information which will help to identify it); to have and to hold said goods and chattels to the said (name of purchaser), his executors, administrators and assigns to their use forever.

"I hereby covenant with the said grantee that I am the lawful owner of the said goods and chattels; that they are free and clear from all incumbrances; that I have good right to sell the same and that I will warrant and defend the same against the lawful claims and demands of all persons.

"In witness whereof, I, the said (name of party selling) hereunto set my hand and seal the.....day of..... 192....

"Signature of party selling.....Seal"

**17. In Case of Accidents.**—Accidents will happen in spite of the most careful driving. If you chance to be mixed up in one here are a few things to remember:

a. Do not drive away without reporting the facts to the police or nearest police station, or without giving your name, address and license number to the other party involved. Such action on your part would constitute a felony, punishable by fine or imprisonment.

b. Be sure to get the name and address of the other party, or if he drives away, his license number.

c. Get the names and addresses of all persons who witnessed the accident, or saw the results of it, including all injured persons.

d. Try to visualize just how it happened, remember your own position and that of the other party, both before and after the accident, and note carefully the wheel marks on the road or pavement.

e. Be calm and courteous. Do not admit that you are in the wrong or accuse the other party.

f. Do not make immediate settlement or offer to do so, nor incur any expense except for necessary medical relief.

**18. License Laws of the State.** The question often comes up as to how long a visiting motorist can operate his car in another State without taking out a license in that state. The laws of the different states are summarized as follows:

| | |
|---|---|
| Alabama | Reciprocal |
| Arizona | 4 months |
| Arkansas | 90 days |
| California | 6 months |
| Colorado | 90 days |
| Connecticut | 15 days |
| District of Columbia | Reciprocal |
| Delaware | Reciprocal |
| Florida | Reciprocal |
| Georgia | 30 days; $1 fee for longer period |
| Idaho | Reciprocal |
| Illinois | 6 months; Reciprocal |
| Indiana | 60 days |
| Iowa | Reciprocal |
| Kansas | 60 days |
| Kentucky | Reciprocal |
| Louisiana | Reciprocal (90-day period) |
| Maine | 30 days |
| Maryland | Reciprocal |
| Massachusetts | Reciprocal |

| | |
|---|---|
| Michigan | 90 days; Reciprocal |
| Minnesota | 3 months |
| Mississippi | 30 days |
| Missouri | Reciprocal |
| Montana | Reciprocal |
| Nebraska | 30 days |
| Nevada | not exceeding 3 months |
| New Hampshire | not exceeding 20 days |
| New Jersey | 15 days |
| New Mexico | 30 days |
| New York | Reciprocal |
| North Carolina | 60 days; Reciprocal |
| North Dakota | Reciprocal |
| Ohio | Reciprocal |
| Oklahoma | Reciprocal |
| Ontario | 21 days |
| Oregon | 90 days |
| Pennsylvania | Reciprocal |
| Rhode Island | 10 days |
| South Carolina | 30 days |
| South Dakota | Reciprocal |
| Tennessee | Reciprocal |
| Texas | 30 days; $1 fee for longer period |
| Utah | 90 days |
| Vermont | Reciprocal |
| Virginia | 2 periods, 7 days each |
| Washington | 90 days |
| West Virginia | Not to exceed 3 months |
| Wisconsin | Reciprocal |
| Wyoming | 90 days |

Where the word "reciprocal" appears as for instance after Massachusetts, it means that whatever laws are applied to the citizens of Massachusetts when visiting the state of the visiting motorist, apply to such motorist when in Massachusetts. For example the New Jersey law allows a visiting motorist to stay only fifteen days on the license of his home state. Thus, a car carrying a New Jersey license could stay in Massachusetts only fifteen days. On the other hand an automobile bearing a Pennsylvania license could stay indefinitely in Massachusetts.

## BAILMENT

**1. Definitions.—Bail** is the security for releasing a person from custody. A **Bailment** is a delivery of a thing in trust for some special object or purpose. A **Bailor** is one who makes a bailment or delivers goods to a bailee. A **Bailee** is a person who receives goods of another to hold according to the purpose of delivery.

2. **Bail** means securities who bind themselves either to satisfy the plaintiff, his debt and costs, or to surrender the de-

fendant into custody, provided judgment is rendered against him in the action. The above definition applies to civil action. In criminal cases bail means the sureties who bind themselves to have the prisoner present in court when required for trial. In ordinary parlance the word bail is used as synonymous with the word surety and practically means the same thing. We shall treat the subject in its relation to civil matters under the law of suretyship. In criminal matters, the subject not being germain to the purpose of this book, it is not further discussed.

3. **Bailor and Bailee.**—To create this relation the property must be delivered to the bailee. Thus if A takes his car to a public garage to remain over night, the garage owner becomes a bailee for hire. The contract of bailment also exists when a man takes a suit of clothes to a tailor shop to be altered, or when a farmer takes a load of oats to a mill to be ground. If, however, the goods are delivered to another to be sold or exchanged, the contractual relationship ceases and the person to whom the goods were delivered becomes the debtor of the owner.

4. **The Law on Lost Property.**—In point of law, the finder of lost property is entitled to keep it until the owner is found. To attempt to keep it when the owner is known, or where there are means of discovering him, is construed as larceny. The law usually provides the necessary steps to be taken in the case of lost property. The finder must make an honest effort to locate the owner. Failing in this he may retain the property and maintain his rights as against all others. Should the true owner appear, the finder has no lien on the property unless a reward has been offered for its return.

5. The finder does not always take title to the article found. The article must actually have been lost, not merely laid down or aside voluntarily, and forgotten. Thus, if a woman lay down a package in a department store, the owner of the store is the proper custodian, rather than the finder.

6. **The Bailee's Responsibility.**—A bailee cannot as a rule limit his liability by agreement. He becomes the custodian of the goods and is required to exert reasonable care against accident or loss. His liability is limited only as to loss resulting from the nature of the goods stored. For example if a truck load of fruit arrives at a cold storage plant, the owner is not responsible for any loss due to the condition

of the fruit when it arrived. On the other hand if an employee of the storage company negligently allows the goods to spoil, the owner of the fruit can recover from the storage company.

7. Suppose your bank grants you the privilege of keeping a strong box in the bank building without making any charge therefor; is the bank responsible for the loss? The bank, of course, is not bound to exercise as much care as a regular safety deposit company, but it is required to take reasonable precaution, as much care as it uses to protect its own property. Suppose the cashier steals the box, who is responsible? The bank employed the cashier to carry on the business of banking, not to steal. If, therefore, the bank had exercised reasonable care, and if the cashier was a long trusted employee against whom there was no cause for suspicion, the bank would not be responsible for the loss to any greater extent than if the box was stolen by a common burglar.

8. **The Bailee's Duty.**—The bailee is usually a keeper only. However, if he is keeping live stock, he must supply the food necessary to the animal's good condition. Milch cows must be properly milked and in case of sickness animals must be given proper medical care and attention. In every case the bailee is required to exercise reasonable care for the goods in the bailment.

## BANKRUPTCY

1. **A National Bankruptcy Act** was passed by Congress and went into force July 1, 1898, which virtually supersedes and does away with all state insolvency laws and proceedings.

2. **Courts.**—The courts having jurisdiction in bankruptcy cases are the District Courts of the United States, in the several States and Territories, and the Supreme Court of the District of Columbia.

3. **Bankrupts.**—Bankrupts are of two kinds, voluntary and involuntary. Involuntary bankrupts are those who are declared bankrupts by the proper courts on petition of creditors and who have committed one or more of the acts of bankruptcy hereinafter specified. Voluntary bankrupts are

those who are declared to be bankrupts on their own motion or petition. Any person who owes debts, except a corporation, may become a voluntary bankrupt. Any person, except a wage-earner or farmer, any incorporated company or any corporation owing debts to the amount of One Thousand Dollars or over, may be declared an involuntary bankrupt.

BANKRUPT

**4. What Are Acts of Bankruptcy?**—The National Bankrupt Law defines various acts that constitute an act of bankruptcy. They are five in number, namely:

a. Admitting in writing of a person's inability to pay his debts. This may be done by a corporation through its regularly constituted officer.

b. Fraudulently conveying, transferring, concealing, or removing property with the intention of hindering, delaying or defrauding creditors. The intention to hinder, delay or defraud is a question of fact, to be decided by judicial inquiry. Thus, if a man signs over his property to his wife in order to avoid payment of his debts, the court may construe this as an act of bankruptcy. However, if the transfer was made when the owner was free from debt, the property cannot be impeached by subsequent creditors. The transfers of property covered by the act are those which the common law regards as fraudulent.

c. Transferring property when a person is already insolvent constitutes an act of bankruptcy.

d. A general assignment for the benefit of creditors is an act of bankruptcy. In the same way a general assignment for the benefit of creditors made

by the majority of the board of directors and of the stockholders constitutes an act of bankruptcy for a corporation. A petition for the appointment of a receiver of a corporation under the state statutes is NOT an assignment for the benefit of creditors and is, therefore, not an act of bankruptcy.

e. Suffering a creditor to obtain a preference when the debtor is insolvent constitutes an act of bankruptcy. This includes the transfer of property and the payment of money within four months of the time of filing the petition. Like a fraudulent transfer, the intent to prefer one creditor as against another must be proved, although in many cases it is so apparent as to be presumed.

5. **Filing a Voluntary Petition.**—A voluntary petitioner should file his petition in the court of bankruptcy in the judicial district where he has principally resided for the preceding six months. When there is no estate and no claim has been proved and no trustee has been appointed, a bankrupt may withdraw his petition on paying the costs and expenses. The petition must be accompanied by a schedule of the petitioner's property, showing its kind and amount, location, money value, and a list of his creditors and their residences when known, the amount due to them, the security they have, and a claim to legal exemptions, if any. After filing a voluntary petition the judge makes an adjudication. He may do this ex parte, that is without notice to creditors.

6. **Involuntary Petition.**—A petition may be filed against a person who is insolvent and has committed an act of bankruptcy within four months after such action. Three or more creditors having bona fide claims of $500.00 or more in excess of securities held against the debtor may file an involuntary petition in bankruptcy, or if there are less than twelve creditors then any one creditor may file the petition provided his claim amounts to more than $500.00 Creditors whose claims are prior or secured are not considered in involuntary bankruptcy proceedings. The petition must state the names and addresses of the creditors and the bankrupt, his place of business, the nature of it, his act of bankruptcy, that it occurred within four months of the filing of the petition, and that the amount of the claim against him is in ex-

cess of $500.00. This petition must be duly signed and verified. It may be changed or amended for good cause.

**7. Filing the Answer.**—The bankrupt is then subpoenaed to appear before the court to file his answer to the petition. In the meantime, his property may be seized if it can be proved that he is neglecting it or allowing it to decrease in value. Within ten days after he has been declared a bankrupt he must also file with the court a schedule of his property with a list of his creditors, the amounts due them and the security held by them.

**8. Meeting of Creditors.**—After the party has been adjudged a bankrupt, a meeting of all creditors must be called not less than ten days nor more than thirty days after such adjudication, at the county seat of the county where the bankrupt has his principal place of business or resides. At the first meeting of the creditors, the referee presides, allows or disallows claims of creditors, and may publicly examine the bankrupt. At this meeting the trustee is appointed. All claims must be presented under oath in writing, setting forth his claim to the referee. Subsequent meetings may be held at any time.

**9. Who May Vote.**—Only creditors who own provable claims may vote at a creditor's meeting. The membership is usually decided by the referee at the first meeting. An agent, attorney, or proxy with proper credentials may represent a creditor at a creditor's meeting. A ceditor of one of the individual members of a bankrupt partnership cannot vote in a creditor's meeting. A creditor with a secured claim can vote only on the unsecured part thereof.

**10. Proving Claims.**—The next step is the proving and allowing of claims. Bankrupts are allowed the same exemptions as against executions and attachments. Any debt recoverable at law or in equity may be proved. A contingent liability is not provable.

**11. Officers in Bankruptcy.**—The principal officers in bankruptcy proceedings are the referee and trustee. The referees are appointed by the District Judge, hold their terms for two years, and are practically assistant judges to the court, and have general charge of bankruptcy proceedings. Their number is determined by the amount of business, and is largely discretionary with the United States District Judge. Their fee is Ten Dollars, which must be paid when the proceedings are commenced. The trustee is

appointed by the creditors at their first meeting after the person has been declared a bankrupt, and their duties are largely the same as those of receivers or assignees in insolvency proceedings. The trustee represents the bankrupt debtor and the creditors. His duty is to gather together all the debtor's property and to dispose of it for the best interests of the creditors. He can disburse money only by check or draft and must give a detailed accounting at the final creditor's meeting. Both referees and trustees are required to give bond.

12. **Discharge in Bankruptcy.**—After one month and within a year of the adjudication of bankruptcy, the bankrupt may apply for discharge. Creditors are given ten days notice to make objections and then the court considers the application and acts upon it. Discharges in bankruptcy, which protect persons from all debts except those hereinafter mentioned, may be secured on petition to the proper court after the expiration of one month and within twelve months after being adjudged a bankrupt. Such discharge releases a bankrupt from all of his debts, except taxes, judgments for fraud, debts not scheduled, debts created by embezzlement, misappropriation or defalcation.

13.—**Penalty.**—If a bankrupt be convicted of fraudulently concealing any property belonging to his estate as a bankrupt, or if he make a false oath in a bankruptcy proceeding, or enter a false claim against his estate, he is liable to imprisonment for two years or less.

14. **Compositions.**—After a bankrupt has filed the schedule of his property and list of his creditors and has been examined in open court or at a meeting of creditors, he may, if he desires, offer terms of composition. That is, he offers to make immediate payment of a certain proportion of each claim provided the creditor will release him from the balance. This is, of course, precisely what happens by operation of law if the bankruptcy proceeding is carried to a conclusion, but a composition is often more desirable because it can be carried out at once, thus dispensing with a good many of the costs of longer proceedings, and preserving the estate in cases where the property is of a nature that will deteriorate or accumulate expense during a delay. Then, too, if the composition is confirmed by the court the debtor is spared some of the ignominy of having gone through bankruptcy and received a discharge. Before being

filed in court the composition must have been accepted in writing by a majority in number of all creditors whose claims have been allowed, which number must also hold a majority in amount of such claims. When the application for confirmation of the composition is filed in court the money necessary to carry the composition into effect, together with that necessary to pay all debts which have priority, and to pay the costs of the proceedings which have already taken place must be deposited in such place as shall be designated by and subject to the order of the judge. If the judge is then satisfied at a hearing that the composition is for the best interest of the creditors and offered by the bankrupt in good faith, he will confirm it and dismiss the case after each creditor has received his share of the money set aside by the bankrupt as a consideration for the composition. The confirmation of a composition has the same effect as a discharge in that it wipes out all debts of the bankrupt that would be wiped out by a discharge in regular form. In case there is fraud in procuring a compositon, the judge may set it aside upon application of parties in interest filed within six months after the confirmation. If confirmation is refused, or the composition later set aside, the bankruptcy proceedings continue in the manner specified by statute.

## BENEFICIAL ASSOCIATIONS

1. **Definition.**—A beneficial association is an association of individuals for mutual benefit. Sometimes they are business organizations, again purely social. Usually they are both. Fraternal societies, fraternal insurance lodges, trade-unions, churches, and many other religious, social and charitable institutions might be mentioned as examples of beneficial associations.

2. **A Law Unto Themselves.**—The members of a beneficial association agree among themselves to adopt certain laws by which they are bound. Thus, they can do certain things and incur specified liabilities so long as they are not contrary to the civil laws. In this they have much the same powers and privileges as a corporation.

3. **Personal Liability.**—Has a beneficial association the right to sue and be sued? Are the members liable for the debts of the association? The law is not very definite on these questions. It differs in the several states, and even when it is clear, the law does not cover all cases. The Supreme Court of New York has held that the members of an unincorporated beneficial association were partners in the association, and liable to its creditors by common law principles.

4. **A Church Quarrel.**—Suppose, as sometimes happens, the members of a church split off into two factions. Which is entitled to the property? The courts have held that the faction adhering to the laws and customs of the general association is entitled to the property, even though such faction be a minority.

5. **Beneficial Associations and Taxes.**—Purely charitable associations are not taxed as heavily as ordinary commercial associations. The question then arises: Are benefit societies charities? The courts hold that an association promising to pay a fixed sum as a benefit during a member's illness is not a charitable society, and therefore not exempt from taxation. The test is to be found in the objects of the institution. Masonic lodges are regarded as charitable institutions.

6. **The Powers of the Association.**—If the society requires a ceremony of initiation, the mere election of a member does not entitle him to the benefits of the society without such initiation. A benefit society may at any time change its rules as to the payment of dues or the payment of benefits to sick members. Every society or association has the power to expel members unless it is organized purely for gain, and provided that the power is exercised in good faith and for good cause. The following charges are not sufficient to justify expulsion or suspension from a beneficial association:

a. Slander against the society.
b. The illegal drawing of benefits.
c. Defrauding the society of a small sum of money.
d. Conduct unbecoming a gentleman.
e. Speaking ill of a member, etc.

7. **Failure to Pay Benefits.**—Suppose a member make application for a promised sick benefit and his application is refused. Can he hold the members of the society liable?

The applicant should have every right to prove his case but he cannot hold the members of the association personally liable. In the same way an agreement to refer future controversies to arbitration cannot be enforced, as it would deprive a member of his rights under the law.

## BONDS

1. A bond is defined to be an obligation in writing under seal. It is a form of contract which is almost infinite in variety. The parties to the bond are the obligor and the obligee, the former being the one who makes the promise and the latter the person to whom the promise is made.

2. A simple bond is an instrument for the payment of money at a certain time, and generally bears interest at the rate specified in the bond. Nearly all corporate and municipal bonds are of this character and contain no condition except for the payment of the amount of the bond at a certain time and place with a certain specified rate of interest. Frequently interest coupons are attached to the original bond providing for the payments of the several installments of interest as they come due.

The following is the form commonly in use for such bonds:

UNITED STATES OF AMERICA.
JEFFERSON CITY, STATE OF MISSOURI.
RENEWAL SCHOOL BOND.
INTEREST 6 PER CENT., PAYABLE SEMI-ANNUALLY.

The Board of Education of the City of Jefferson, County of Cole, and State of Missouri, being legally organized under and pursuant to an act of the General Assembly of the State of Missouri entitled "An act to revise and amend the Laws in relation to Public Schools in Cities, Towns and Villages," approved April 26th, 19...., for value received promise to pay to the bearer ten years after the date hereof ONE THOUSAND DOLLARS, at the St. Louis National Bank, in the City of St. Louis, Missouri, and interest thereon at the rate of Six per centum per annum from the date hereof, which interest shall be payable semi-annually at said St. Louis National Bank in the City of St. Louis, Missouri, on the surrender of the proper interest coupons hereto attached. This bond shall be redeemable at the pleasure of the said Board of Education of the City of Jefferson at any time after the expiration of Five years from the date hereof, and is issued under and pursuant to an act of the General Assembly of the State of Missouri, entitled "An Act to authorize Board of Education to issue renewal funding School Bonds to be sold or exchanged for the purpose of meeting and paying matured or maturing bonded indebtedness of school districts and for levying special tax to pay the bonded indebtedness of school districts," approved April 11th, 19....

In Testimony Whereof: the said Board of Education has caused this

bond to be signed by the President, countersigned by the Secretary, authenticated by the seal of said Board of Education and attested by the Clerk of the County Court of said County of Cole, with the seal of said Court affixed this First day of July, 19....

JOHN JONES, President.
WM. SMITH, Secretary.
GEO. SMILEY, Clerk County Court.

2. **Bonds of Public Officials** conditioned for the faithful performance of certain things are almost of infinite variety and in common use. All State, county, town and city officers having in their hands moneys or funds of any character belonging to said corporation are required to give bonds for the proper performance of the duties of their office. The following form of a bond of city treasurer can be used with few slight changes for almost any office:

KNOW ALL MEN BY THESE PRESENTS, That we, John Jones, Henry Smith, and Charles Marshall of the City of Naperville, County of Du Page, and State of Illinois, are held and firmly bound unto the City of Naperville in the penal sum of Twenty Thousand ($20,000) Dollars, for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, and administrators jointly and firmly by these presents.

Witness our hands and seals this 14th day of July. 19....

The condition of the above obligation is such that whereas the above bounden John Jones has been duly elected to the office of City Treasurer of the City of Naperville, Now if the said John Jones shall faithfully perform all the duties of said office and shall account for and pay over all moneys that may come into his hands as such Treasurer, according to law, and the ordinances of said City and the order and direction of the city council of said City, then this obligation to be void, otherwise to remain in full force and effect.

JOHN JONES, (Seal.)
HENRY SMITH, (Seal.)
CHARLES MARSHALL. (Seal.)

3. **Officers of Corporation** are generally required to give bonds for the faithful performance of their duties. The following form can be used for nearly all such bonds:

KNOW ALL MEN BY THESE PRESENTS, That we, James Lord, John Williams, and Charles Smith, are held and firmly bound unto the Naperville Manufacturing Company, a corporation duly organized under the laws of the State of Illinois, in the penal sum of Ten Thousand ($10,000) Dollars, good and lawful money of the United States for the payment of which, well and truly to be made for said corporation or its assigns, we bind ourselves jointly and severally by these presents.

Witness our hands and seals this 14th day of July. 19....

The condition of the above obligation is such that whereas the above bounden has been elected President of the Naperville Manufacturing Company; Now Therefore, if the said James Lord shall well and truly perform the duties of his said office and shall account for and pay over all moneys that shall come into his hands as such President, according to the rules of said corporation and the order and direction of the board of direction thereof, then this obligation shall be void, otherwise to remain in full force and effect.

JAMES LORD, (Seal.)
JOHN WILLIAMS, (Seal.)
CHARLES SMITH, (Seal.)

**4. Indemnifying Bonds.**—Bonds are also frequently given to indemnify persons who incur liability for another in nearly all walks of life. The following form may be used:

KNOW ALL MEN BY THESE PRESENTS, That William Marsh, Principal, and John Henry, Surety, are held and firmly bound unto John Jones in the penal sum of One Hundred ($100) Dollars lawful money of the United States, for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, and administrators, jointly, severally and firmly by these presents.

Witness our hands and seals this 1st day of June, A. D. 19....

The condition of the above obligation is such that whereas the said John Jones has been surety for the above bounden William Marsh on his note for One Hundred ($100) Dollars, payable to the order of Charles William, due in one year from the date hereof, with interest at the rate of 6 per cent. per annum.

Now, Therefore, if the said William Marsh shall well and truly pay the said note with all interest thereon when the same comes due and shall from time to time and at all times hereafter save, keep harmless and indemnify the said John Jones of and from all actions, suits, costs, charges, damages, and expenses whatsoever, including attorney's fees which shall or may at any time hereafter happen or come to him for any reason, by reason of his becoming surety on said note, then this obligation to be void, otherwise to remain in full force and effect.

WILLIAM MARSH, (Seal)
JOHN HENRY. (Seal.)

**5. Executor's Bond.**—Executors, administrators, guardians and conservators are required to enter into bonds to be approved by the proper court before they are allowed to enter upon their duties as such. The forms for such bonds, however, vary in the different States.

## BROKER

**1. Definitions.**—A Broker is a person who transacts business for another, commonly in stocks, bills, notes, shipping, insurance, real estate, pawned goods, merchandise, etc., using the name of the principal. His sales are usually private. Brokerage is the fee charged for transacting business by a broker.

**2. Why Brokers Are Employed.**—Brokers are often employed to transact business or to negotiate bargains between different individuals. Their attention being given to one class of business, they acquire a knowedge and skill that an average merchant does not possess. It is often advantageous for large firms to employ brokers to buy their raw material. In our large cities brokers in anything and every-

thing that is bought and sold in large quantities are extensively employed. The business of brokerage is regulated largely by the customs of the trade.

A TYPICAL BROKER'S OFFICE.

3. **A Broker's Liability.**—A Broker usually has no special property in the goods he sells. If he does not disclose the principal's name he is liable like other agents. He must serve faithfully and cannot act for both parties in the same transaction without the consent and knowledge of both. Neither can he delegate his powers without the principal's assent. He is bound to obey the express instructions of his principal, and to keep accurate accounts of his transactions.

4. **A Broker's Compensation.**—Usually a broker's compensation is a commission or percentage of the value of the thing sold or exchanged. If the amount of the compensation is not fixed, the custom of the trade rules. A broker is entitled to a reasonable compensation for his services.

5. **A Real Estate Broker** must act for his principal alone. He is employed to negotiate sales and exchanges of land, and often such additional duties as renting real estate, collecting rents, and procuring loans. To gain his commission on the sale he must produce a customer who is ready, able and willing to accept and live up to the terms of the sale.

A property owner cannot avoid paying the commission or brokerage by selling the property himself, or at a lower price than he listed with the broker.

6. **Pawn Brokers.**—The business of a pawn broker, the rate of interest he may charge, and the sale of pawned goods are usually regulated by law. A license is usually required and the business is always subject to regulation and control. Suppose A takes a watch to a pawnbroker who advances him $20.00. A, or his assignee or the purchaser of the pawn ticket may redeem it within the fixed time, or even beyond that time, if the pawn broker has not exercised his right to sell the watch. Thus a pawner has the right to assign or sell his interest in the watch. If A fails to redeem the watch, the pawnbroker can usually hold him for any deficiency after the watch is sold. In like manner, if A gives the watch to B to sell, who instead of selling it pawns it, the pawnbroker is protected in taking it as security for a loan. (See **Agency.**)

## CARRIERS

1. **Definitions.**—A carrier is a person or company that undertakes, or whose business it is to carry persons or merchandise for hire. Carriers are of two kinds, private and public. **A Private Carrier** is one who carries only occasionally, and not as a public business. Such a carrier need not serve all who wish to employ him, but is liable for negligence in transporting the goods he accepts. **A Public or Common Carrier** is one whose regular business it is to carry goods or passengers from place to place for all persons who elect to employ and pay him.

2. **Examples.**—A private carrier is usually an individual who carries merchandise from one point to another as a favor to a friend or for a consideration either orally or in writing. He is bound to exercise such care of the property as a man of ordinary intelligence would of his own property. His liability is less if he acts without compensation. Examples of common carriers are railroad companies, steam ship companies, street car companies, taxi cab companies, truckmen, wagoners, teamsters, express companies, and porters who hold themselves out to carry goods or passengers from one country to another, from one portion of the country to

another, from one town to another, or from one place in the same town to another, for all persons who offer to employ them.

3. **Responsibility.**—Common Carriers are responsible for all loss and damage caused by transportation from whatever cause, except the act of God and public enemy, and they are bound to carry all goods which are offered them, and if they refuse without just excuse they are liable to an action.

4. **Act of God** is held to extend only to such inevitable accidents as occur without the intervention of man's agency. The carrier is not responsible for losses occurring from natural causes, such as frosts, fermentation or natural decay of perishable articles, or the necessary and natural wear in the course of transportation, provided he exercises all reasonable care to have the loss or deterioration as little as practical.

5. **Loss by Fire.**—The carrier is liable for any and all loss occasioned by accidental fire.

6. **Perishable Goods.**—Carriers are not responsible for loss to fruits that decay in their possession or goods shipped in defective boxes, such as glassware not properly packed and other articles that are easily broken. Goods must be properly packed in order to make the carrier responsible.

7. **Bill of Lading.**—Bill of lading is the receipt given by the Common Carrier to the owner of the goods desiring to have the same shipped and should contain a description of the quantity, the marks on the merchandise, the name of the shipper, or the person sending the goods, and the consignee, the name of the person to whom the goods are shipped, place of departure and place of discharge of the goods and the price of freight, and also weight of the separate packages and the number of the car in which the same were shipped.

8. **Equal Liability.**—Railroad Companies and other carriers who allow express companies to carry parcels and packages on their cars or other vehicles are liable as the Common Carriers for all damages which occur, without regard to the contract between them and such express company. On July 1, 1918, the government took over the control of the principal express companies, operating them as one unit under the name of the American Railway Express Company. The government supervision is now at an end,

but the individual companies still act as one unit under the same name.

9. **Baggage.**—In the transportation of the baggage of passengers the liability of the carrier for loss to the same is the same as in case of transportation of goods for hire, and in case of loss the carrier must make it good.

10. **When Liability Begins and Ends.**—The responsibility of the Common Carrier begins upon the delivery of the goods for immediate transportation. A delivery at the usual place of receiving freight or to the employes of the company in the usual course of business is sufficient. The responsibility of the carrier terminates after the arrival of the goods at their destination and sufficient time has elapsed thereafter for the owner to have received them during business hours. After the expiration of such time the responsibility of the carrier is simply that of a warehouse man and he is only required to keep the goods with ordinary care.

11. **Limitation of Liability.**—A carrier can limit his liability by contract, unless forbidden by statute. Thus a bill of lading given as a receipt for a freight or express shipment, or a receipt given a passenger limiting the amount of the carrier's liability on his baggage is considered binding by the courts, and relieves the carrier of additional liability. The general rule is that a carrier may relieve himself from all liability except from his own negligence.

12. **The Passenger's Rights.**—The law compels carriers to carry all passengers who pay the required fare, and who are in a sufficiently intelligent condition to travel. The carrier must exercise great care in transporting passengers and is liable for damages should injury occur due to the carrier's negligence. If the passenger was himself negligent and contributed to his own injury, he cannot as a rule hold the carrier liable. Although a sleeping car company is not a common carrier, it is liable for negligence in protecting the passengers from theft.

13. **Different Lines.**—Where goods are shipped to points beyond the line of the carrier to whom they are first delivered, such carrier is not responsible beyond his own portion of the route unless he gives bills of lading for the entire route and the contract contemplates the transportation and delivery of the goods at their destination.

14. **Demurrage** is the penalty exacted by transportation companies for not unloading goods from their cars within

the time fixed by the rules of the companies. The rules of a large number of railroad companies require that the car be unloaded within twenty-four hours after its arrival at the destination and a fixed rate of demurrage for each twenty-four hours of delay after the expiration of the usual time for unloading is imposed on the persons to whom goods are shipped. In practice companies are not very strict in enforcing this penalty, unless they are unable to meet the demand for cars.

15. **A Public Officer** in performing his duty is exempt from all liability. In like manner the U. S. Government acting as a common carrier of the mails cannot be held liable.

16. **The Carrier's Rights.**—The carrier is entitled to a reasonable compensation for his services, and may demand payment in advance. The shipper is liable for freight, unless the carrier agrees to look exclusively to some other party; or after delivery, the carrier may recover the amount of freight from the consignee. But freight may be collected only for the goods actually delivered, unless the delivery be prevented by the owner, or it be agreed that freight shall be payable regardless of losses by the way. The carrier also has a lien on the goods for his freight and advances on such goods, and may refuse to deliver until such charges be paid. This lien has priority over the vendor's right of stoppage in transit, and the claims of the general creditors of the owner on consignee. A carrier by water also has a lien for salvage, and for customs duties advanced on imported goods.

17. **Telegraph and Telephone Companies** are not common carriers and may therefore establish reasonable regulation for the transmission of messages. Like common carriers, however, they are required to serve all who apply and offer to pay the charges and are liable for damages when messages are not sent promptly and accurately.

## CHATTEL MORTGAGE

1. **Definition.**—A chattel mortgage is a conveyance of personal property to secure the payment of a debt. It is a pledge that the debt will be paid. Any personal property that may be sold may be mortgaged such as live stock, machinery, farm implements, life insurance policies, corporation stock, wages, crops, premiums, profits and many other things. The **mortgagor** is the person who conveys the property. The **mortgagee** is the person to whom the transfer is made.

2.—**Form of Mortgage.**—The usual form of a chattel mortgage is a bill of sale with the conditional clause stating the terms of the loan, and that on the mortgagor's failure to pay, the mortgagee may take possession of the property. Any person competent to make a contract, or his agent, may make a chattel mortgage. Partners or joint tenants may mortgage jointly on their individual interests. A corporation may also mortgage its personal property.

3. Chattel mortgages are usually given to secure notes of the mortgagor in the same way in which real estate mortgages are given to secure notes of the mortgagees. Greater strictness, however, is required in the acknowledgment, docketing, and recording of chattel mortgages than in the case of real estate mortgages. A chattel mortgage must be acknowledged before a justice of the peace, or before the county judge of the county, in which the mortgagor resides; in South Dakota they are not acknowledged, but require two witnesses.

4.—**Describing the Property.**—The property mortgaged must be described clearly enough to enable third persons to identify it, but this is determined largely by the nature of the chattels. Animals are usually described by weight, age, sex, color, height, breed and location. "All" articles in a stated place is generally a valid description.

5. **Foreclosure.**—When the mortgagor fails to pay his debt, the right of the mortgagees to proceed in taking the property is regulated by law. In most chattel mortgages a clause is included permitting the mortgagee to seize and sell the property should the mortgagor fail to make payment. Unless the property is so taken, it can be taken by other creditors.

**6. General Principles.**—Chattel mortgages may in most States not run longer than one year. To sell property covered by a chattel mortgage is a criminal offense. A chattel mortgage given on personal property which is left in possession of mortgagor is prima facie void as to creditors of mortgagor. To render it valid it must contain permission by mortgagee that mortgagor may retain possession of the chattels, and that mortgagee may take possession of them whenever he feels himself insecure for any reason. Recent statutes provide that notes secured by chattel mortgages must show on their face that they are secured by chattel mortgages, or they are absolutely void. Any defense which the maker of the note secured by chattel mortgage could make against the original payee is good against the note in the hands of an indorsee, even though indorsed before maturity. Chattel mortgages on household goods must be signed by the wife of the mortgagor and can only be foreclosed by a court proceeding. **(See Mortgage.)**

### Chattel Mortgage with Power of Sale

Know all men by these presents, that I, A. B., in consideration of the sum of $..... paid by C. D., have bargained and sold, and by these presents do hereby sell and convey to said C. D. the following goods, and chattels, to-wit: (describe the articles mortgaged, or refer to them as the goods and chattels mentioned in the schedule hereto annexed), and which is now in my possession.

Whereas, the said A. B. is justly indebted to C. D. in the sum of $....., payable on the..... day of..... 19...., with interest at ten per cent from the..... day of ....., 19..... (upon a promissory note of even date herewith, or for goods sold and delivered).

Now the condition of the above obligation is such that if the said A. B. shall well and truly pay said C. D. said sum of money and interest when the same shall become due, then this conveyance shall be void, otherwise to remain in full force and effect. It is also agreed that said A. B. may retain possession of the said mortgaged property until said debt becomes due. But if default be made in the payment of said sum or any part thereof, the said C. D. and his assigns are hereby authorized to sell said goods and chattels, or so much thereof as will be necessary to satisfy the amount then due, together with the cost and expenses incurred by reason of said default.

(Signed) A. B.

In the presence of E. F.

### Mortgage on Goods and Chattels
### Another Form

Know all men by these presents, that A. B., residing at..... of the first part, for securing the payment of the....., hereinafter mentioned, and in consideration of the sum of $1, to..... in hand paid, at or before the ensealings and delivery of these presents, by C. D., of the second part, the receipt whereof is hereby acknowledged, ha..... granted, bargained, sold, and assigned, and by these presents do..... grant, bargain, sell, and assign unto the said part.....

of the second part, all..... now remaining and being.....

To have and to hold all and singular, the goods and chattels above bargained and sold, or intended so to be, unto the said part..... of the second part, ..... executors, administrators, and assigns forever. And the said part ..... of the first part, for ..... heirs, executors, and administrators, all and singular, the said goods and chattels above bargained and sold unto the said part ..... of the second part, ..... executors, administrators, and assigns, against the said part ..... of the first part, and against all and every person or persons whomsoever shall and will warrant, and by these presents forever defend.

Upon condition, that if the said part ..... of the first part shall and do....well and truly pay, or cause to be paid, unto the said part.... of the second part, ..... executors, administrators, or assigns, the sum of ....., then these presents and everything herein contained shall cease and be void. And the said part ..... of the first part, for ..... executors, administrators, and assigns, do ..... covenant and agree to and with the said part ..... of the second part, ..... executors, administrators, and assigns, to make punctual payment of the money hereby secured ..... And in case default shall be made in payment of the said sum above mentioned, or in case the said part ..... of the second part shall sooner choose to demand the said goods and chattels, it shall and may be lawful for, and the said part ..... of the first part do ..... hereby authorize and empower the said part ..... of the second part, ..... executors, administrators, and assigns, with the aid and assistance of any person or persons, to enter and come into and upon the dwelling-house and premises of the said part ..... of the first part, and in such other place or places as the said goods and chattels are or may be held or placed, and take and carry away the said goods and chattels to sell and dispose of the same for the best price they can obtain, at either public or private sale, and out of the money to retain and pay the said sum above mentioned, with the interest and all expenses and charges thereon, rendering the overplus (if any) unto the said part ..... of the first part, ..... executors, administrators, and assigns. And until default be made in the payment of the aforesaid sum of money, the said part ..... of the first part to remain and continue in quiet and peaceable possession of the said goods and chattels, and the full and free enjoyment of the same, unless the said part ..... of the second part, ..... executors, administrators, or assigns, shall sooner choose to demand the same; and until such demand be made, the possession of the said part ..... of the first part shall be deemed the possession of an agent or servant, for the sole benefit and advantage of his principal, the said part ..... of the second part.

In witness whereof, the said part ..... of the first part, ha..... hereunto set ..... hand ..... and seal..... this ..... day of ....., 19....

Sealed and delivered in the presence of

..... County of .....ss.:

On this ..... day of ....., 19...., before me came ....., to me known to be the person ..... described in and who executed the foregoing instrument, and ..... acknowledged that ..... he ..... executed the same.

## Notice of Sale Under Chattel Mortgage

Notice is hereby given that by virtue of a chattel mortgage, dated on the ..... day of ..... 19...., and duly filed in the office of the county clerk of ..... county, ..... on the ..... day of ....., 19...., and executed by A. B. to C. D. to secure the payment of the sum of $....., and upon which there is now due the sum of $..... Default having been made in the payment of said sum, and no suit or other pro-

ceeding at law having been instituted to recover said debt or any part thereof, therefore, I will sell the property therein described, viz: (here describe the articles substantially as in the mortgage) at public auction at the house of ....., in the (city, town, or precinct) of..... ....., in ....., county, on the ..... day of ....., at one o'clock P. M of said date.

C. D.
Mortgagee.

Dated ....., ....., 19....

### Assignment of Mortgage

This instrument, made this ..... day of ....., 19...., between ....., of the first part, and ....., of the second part, witnesseth: That the part ..... of the first part, for a good and valuable consideration, to ..... in hand paid by the part ..... of the second part, ha..... sold, assigned, transferred, and conveyed, and do ..... hereby sell, assign, transfer, and convey to the part ..... of the second part, a certain mortgage bearing date the ..... day of ....., 19...., made by ....., recorded in the clerk's office of ..... county in liber....., of mortgages, at page ....., on the ..... day of ....., 19...., at .. ..... o'clock .....m., together with the bond accompanying said mortgage, and therein referred to, and all sums of money due and to grow due thereon. And the part ..... of the first part hereby covenant that there is ..... due on the said bond and mortgage the sum of .....

In witness whereof, the part ..... of the first part ha..... hereunto set ..... hand ..... and seal ..... the day and year first above written.

(Assignment clause.)

## CITIZENSHIP

1. **Definition.**—A **Citizen** is a member of a state or nation who enjoys political rights and is entitled to public protection. Citizenship, therefore, carries with it the duty of allegiance to the government and the right of protection from it.

2. **General Principles.**—A person residing in any of the several states owes an allegiance both to the United States and to the State, and may demand protection from each government. A resident of the District of Columbia or Alaska is a citizen of the United States only. A citizen's ordinary rights are protected by the state government. All persons born in the United States and subject to its jurisdiction are citizens of the United States. Formerly a woman took the citizenship of her husband upon marriage. Now marriage does not affect the citizenship of the wife unless her husband is ineligible for naturalization. Neither does naturalization of the husband operate to confer citizenship upon the wife.

## Qualifications for Suffrage.

| States. | Requirements as to Citizenship. | Residence in | | |
|---|---|---|---|---|
| | | State. | County | Precinct. |
| Alabama (a) .... | Citizen or declared intent | 2 yr... | 1 yr... | 3 mo.. |
| Alaska ..... | Citizen ..... | 1 yr... | ..... | 30 days. |
| Arizona ..... | Citizen or declared intent | 1 yr... | 30 days. | 30 days. |
| Arkansas (c) .... | Citizen or declared intent | 1 yr... | 6 mo.. | 1 mo.. |
| Califor'a (h)(i)(a) | Actual citizens ..... | 1 yr... | 90 days. | 30 days. |
| Colorado (b) .... | Citizen or declared intent | 1 yr... | 90 days. | 10 days. |
| Connecticut (o)(a) | Actual citizens ..... | 1 yr... | 6 mo.. | 6 mo.. |
| Delaware (a) .... | Actual county taxpayers. | 1 yr... | 3 mo.. | 30 days. |
| Florida (b) ..... | Citizen ..... | 1 yr... | 6 mo.. | 30 days. |
| Georgia (o)(a) ... | Actual citizens ..... | 1 yr... | 6 mo.. | 30 days. |
| Idaho (÷)(a)..... | Actual citizens ..... | 6 mo.. | 30 days. | 10 days. |
| Illinois (a) ..... | Actual citizens ..... | 1 yr... | 90 days. | 30 days. |
| Indiana (e) ..... | Citizen or declared intent | 6 mo.. | 60 days. | 30 days. |
| Iowa (d) ..... | Actual citizens ..... | 6 mo.. | 60 days. | 10 days. |
| Kansas (d)..... | Citizen or declared intent | 6 mo.. | 30 days. | 10 days. |
| Kentucky (d) .... | Actual citizens ..... | 1 yr... | 6 mo.. | 60 days. |
| Louisiana (o)(a).. | Citizen ..... | 2 yr... | 1 yr... | 6 mo.. |
| Maine (a) ..... | Actual citizens ..... | 3 mo.. | 3 mo.. | 3 mo.. |
| Maryland (o) (b). | Actual citizens ..... | 1 yr... | 6 mo.. | 1 day.. |
| Massachus'ts (o)(a) | Citizen ..... | 1 yr... | 6 mo.. | 6 mo.. |
| Michigan (a)..... | Citizen or declared intent | 6 mo.. | 20 days. | 20 days. |
| Minnesota (a) .... | Citizen ..... | 6 mo.. | 30 days. | 30 days. |
| Mississippi (‖)(b). | Actual citizens ..... | 2 yr... | 1 yr... | 1 yr... |
| Missouri (b) ..... | Citizen or declared intent | 1 yr... | 60 days. | 60 days. |
| Montana (a) ..... | Citizen ..... | 1 yr... | 30 days. | 30 days. |
| Nebraska (a) ..... | Citizen or declared intent | 6 mo.. | 10 days. | 10 days. |
| Nevada (b) ..... | Citizen or declared intent | 6 mo.. | 30 days. | 30 days. |
| N. Hampshire (a). | Actual citizens ..... | 6 mo.. | 6 mo.. | 6 mo.. |
| New Jersey (a)... | Actual citizens ..... | 1 yr... | 5 mo.. | ..... |
| New Mexico (a)... | Actual citizens ..... | 1 yr... | 90 days. | 30 days. |
| New York (d)..... | Actual citizens ..... | 1 yr... | 4 mo.. | 30 days. |
| N. Carolina (o)(b) | Actual citizens ..... | 2 yr... | 6 mo... | 4 mo... |
| North Dakota (d). | Citizen or declared intent | 1 yr... | 6 mo... | 90 days. |
| Ohio (d) ..... | Actual citizens ..... | 1 yr... | 30 days. | 20 days. |
| Oklahoma (a) ... | Actual citizens ..... | 1 yr... | 6 mo.. | 30 days. |
| Oregon (a) ..... | Citizens 21 years old... | 6 mo.. | ..... | ..... |
| Pennsylvania (b).. | Actual citizens ..... | 1 yr... | ..... | 2 mo.. |
| Rhode Island (a). | Actual citizens ..... | 2 yr... | ..... | 6 mo.. |
| S. Carolina (‖)(b). | Actual citizens ..... | 2 yr... | 1 yr... | 4 mo.. |
| South Dakota (a). | Citizen or declared intent | 6 mo.. | 30 days. | 10 days. |
| Tennessee (d) .... | Actual citizens ..... | 1 yr... | 6 mo... | ..... |
| Texas (d) ..... | Citizen or declared intent | 1 yr... | 6 mo.. | 6 mo.. |
| Utah (b) ..... | Citizen ..... | 1 yr... | 4 mo.. | 60 days. |
| Vermont (a) ..... | Actual citizens ..... | 1 yr... | 3 mo.. | 3 mo.. |
| Virginia (o)(a).... | Actual citizens ..... | 2 yr... | 1 yr... | 30 days. |
| Washington (a)... | Citizen or declared intent | 1 yr... | 90 days. | 30 days. |
| West Virginia (c). | Actual citizens ..... | 1 yr... | 60 days. | 10 days. |
| Wisconsin (d) .... | Citizen or declared intent | 1 yr... | 10 days. | 10 days. |
| Wyoming (a) .... | Citizen ..... | 1 yr... | 60 days. | 10 days. |

(a) Registration required by law. (b) Required by constitution. (c) Prohibited by constitution. (d) Required in large cities. (e) No registration required. (x) Mayor and city council have power to require registration. (o) Educational qualification (read the constitution in the English language), or own property assessed for not less than $300, or voter on Jan. 1, 1867, or descendant of such voter, or a foreigner naturalized prior to Jan. 1, 1898. (h) Citizen 90 days before election. (÷) Bigamists disqualified. (i) Native of China disqualified. (‖) Educational qualification by which voter is required to read and understand constitution.

The year 1920 brought the passage of the nineteenth amendment to the constitution of the United States granting women complete suffrage in all the states.

3. **Naturalization.**—Aliens may acquire American citizenship by becoming naturalized. This requires, first, a continuous residence in the United States for five years, second, one year's residence in the State, and third, that the alien must have appeared in court at least two years before and then and there declared his intention to become a citizen, and renounced allegiance to his former sovereign. He must prove his residence and his good character, and must take an oath to support and defend the constitution and laws of the United States and renounce allegiance to any foreign prince. Thus naturalization confers American citizenship on his minor children if they reside in the United States.

4. **Alien's Rights.**—Aliens have the right to hold and transfer title to real estate. At common law they are entitled to purchase, own, and sell personal property, engage in business and to make contracts or wills. In return they must obey the laws and the courts of the land in which they reside. Anarchists, polygamists, diseased or criminal immigrants, and Chinese laborers have been excluded from the United States.

5. **Fees.**—It costs an alien $5.00 to become a Naturalized American citizen, $1.00 for declaring intention, $2.00 for filing the application for citizenship, and $2.00 for entering the order and issuing certificate of citizenship. During the world war all foreign born members of the army or navy were granted complete citizenship immediately after enlistment. Thousands took advantage of this simple, speedy, and inexpensive method of acquiring citizenship.

## COMMERCIAL PAPER

1. **Definitions.**—The term **"commercial paper"** covers all papers used in the course of trade. **Negotiable paper** is paper that can be sold or transferred. A **negotiable instrument** is any paper that may be transferred by assignment, indorsement, or delivery. The person who promises to pay is called the **maker,** and the one to whom he promises is called the **payee.**

2. **Kinds of Negotiable Paper.**—Almost every written contract or agreement to pay money is negotiable, in the sense that the owner can sell it to a third person who can

enforce it from the maker. However, in the strictest sense of the word there are only three forms of negotiable paper, namely checks, notes, and bills of exchange or drafts.

3. **Form of Negotiable Instruments.**—The law does not require negotiable instruments to be in any prescribed form. However, certain things are necessary in all checks, notes or bills of exchange to make them negotiable:

a. They must be in writing, on any kind of paper and in pen, pencil or type.
b. They must be signed.
c. They must be payable on demand or at a fixed time.
d. They should be made payable to bearer or to order.
e. The name of the place and State should be written on the note. It is as important as the date.
f. The amount must be specified and certain.
g. It must be an unconditional promise to pay in money.
h. There must be no apparent alterations, erasures or additions.
i. The time of payment must not have passed.

4. **Consideration.**—While it is not always necessary to express any consideration in negotiable paper, it is safer to do so. In the hands of an innocent third party, the law assumes a valuable consideration. The words "for value received" usually appear on promissory notes.

5. **Protest.**—A protest of a note, check or draft is a formal statement by a notary public that the paper was presented for payment and was refused. The costs are added to the instrument.

6. **Negotiability.**—The words "or bearer," or "or order" render a paper negotiable. Any person capable of making a contract is capable of making a negotiable instrument. A paper which passes into the hands of an innocent third party carries a good title provided: (a) The paper is negotiable, (b) it was made in good faith and for valuable consideration; (c) the purchaser was not aware of any legal or equitable defense.

### A. Notes

1. **Definitions.** A note is a simple written promise to pay a certain sum at a certain time, or on demand or "at sight" to a person named therein. An individual promissory

note is a note in which one party promises to pay another a certain sum of money at a specified time. **A joint promissory note** is the same as an individual note except that it is signed by two or more parties, all of whom are liable jointly but not severally. In a **joint and several promissory note** two or more parties severally and separately agree to pay a certain sum at a specified time, and each signer is responsible for the whole amount.

2. **Transferring Notes.**—The following rules govern the transferring of notes:

a. Paper payable to bearer is transferred by delivery, payable to order by indorsement.
b. An endorser is a person who writes his name on the back of it.
c. Indorsement in blank is writing only the name without the words, "pay to the order of."
d. The indorser is liable for its payment if the maker fails to meet it.
e. An indorser who is compelled to pay a note has a just claim against the maker and against each indorser whose name appears above his own.
f. An indorser to whose order a note is drawn or indorsed, can transfer it without becoming liable for its payment by writing the words "without recourse" over his signature on the back.

3. **Collecting Notes.**—

a. A note destroyed by fire can be collected by proof of loss.
b. Money paid under mistake must be refunded.
c. If no time is specified the note is payable on demand.
d. The day of maturity is the day on which a note becomes legally due. In some states three days, called days of grace, are allowed after the expiration of the time given in the note before it becomes legally due. (See **Interest Laws and Statute of Limitation.**)
e. In finding the day of maturity actual days must be counted if the note is drawn days after date, but months are counted when the note is drawn months after date.
f. Negotiable paper payable to bearer or indorsed in blank, which has been lost or stolen, cannot be collected by the finder or thief, but a holder who inno-

cently receives it in good faith before maturity for value, can hold it against the owner's claims.

g. A note made in one State, payable in another, must be governed by the laws of that State in which it is to be paid.

h. Demand for payment of a note must be made upon the day of maturity and at the place named. If no place is specified then it is payable at the maker's place of business or at his residence. If it falls due on Sunday, demand must be made the day previous. In most of the States where note falls due on Sunday or legal holiday, by statute the maker is given until the following day to pay the same.

i. An extention of the time of a note by the holder, releases sureties and indorsers, unless consent to such extension has been given by the indorsers or sureties.

j. Upon presentment for payment and refusal by the maker at maturity, in order to hold the indorser, suit should be immediately instituted upon the note against the maker, and notice of default should be given to the indorser, and in some States the note should be protested by a notary public.

**4. Payment of Notes.**—All the parties who have endorsed a note are liable for the amount, but only one satisfaction can be recovered. Payments made to apply on a note should always be endorsed on the back thereof. In many cases payment is defeated and the notes become void especially when held by the original payee. Such are:

a. A note given by one who is not of age, unless the minor ratifies it after becoming of age.

b. A note made by an intoxicated person.

c. A note given by one who cannot write and not witnessed to at the time.

d. A note obtained by duress, in case of compulsion, by fear of illegal imprisonment or by threats that would lead an ordinary person to fear injury to his person, his reputation or his property.

e. Obtained by fraud or by finding. In these cases the original parties can not collect anything.

f. A note that has been stolen cannot be collected by

the party that committed the theft, but if an innocent person buys the note for a consideration, he can collect it.

g. A note given for illegal consideration is illegal everywhere.

h. One who receives a note knowing it to have defects, gets no better right to collect it, than the one from whom he received it had.

i. If a person at the time of taking a note has notice that it is void through fraud, or upon any legal grounds, he cannot collect it.

## Forms of Notes

**Negotiable by Indorsement.**

$375.00. Naperville, Ill., Oct. 7, 19——

One year after date I promise to pay to J. L. Nichols, or order, Three Hundred and Seventy-five Dollars, for value received, with interest at six per cent. J. R. PRICE.

**Negotiable without Indorsement.**

$100.00. Cleveland, O., Aug. 1, 19——

Ninety days after date I promise to pay James Jones, or bearer, One Hundred Dollars, value received. E. M. KECK.

**Not Negotiable.**

$100.00. Chicago, Ill., Dec. 10, 19——

Sixty days after date I promise to pay Geo. C. Dixon One Hundred Dollars, value received. EUGENE LANSING.

**A Corporation Note.**

$200.00. Augusta, Me., Mar. 18, 19——

Nine months after date, the Granite Stone Company promises to pay S. A. Chilton, or order, Two Hundred Dollars, with interest at seven per cent. Value received. GRANITE STONE COMPANY.

Attest: I. K. Dawes, Secretary.

O. R. Phillips, President.

N. B.—If corporation notes are drawn and signed in the above manner, the officers are not personally liable.

**Collateral Note.**

$500.00. Mendota, Tex., Sept. 25, 19..

Sixty days after date I promise to pay to the order of T. J. Boyd, Five Hundred Dollars, without defalcation, for value received. Interest at eight per cent.

Having deposited United States Bonds of the nominal value of Six Hundred Dollars, which I authorize the holder of this Note, upon the non-performance of this promise at maturity, to sell, either at the Brokers' Board or at public or private sale, without demanding payment of this Note, or the debt due thereon, and without further notice, and apply proceeds, or as much thereof as may be necessary to the payment of this Note, and all necessary expenses and charges, holding myself responsible for any deficiency. W. W. STRATTON.

**Judgment Note.**

$2,000.00. Philadelphia, Pa., Jan. 4, 19..

Six months after date I promise to pay J. W. Krasley, or order, Two Thousand Dollars,

value received with interest: And do hereby authorize any attorney of

this county or any other county in this state or elsewhere, to enter and confess judgment for the above sum with costs of suit and attorney's commission of five per cent, for collection, release of errors, and without stay of execution, and do waive the right and benefit of any law of this or any other state exempting property, real or personal, from sale, and if levy is made on land, do also waive the right and inquisition and consent to the condemnation thereof, with full liberty to sell the same on fi. fa. with release of errors therein. GEO. W. BAIRD.

**Payable at Bank.**

$440.00. Chicago, Ill., Oct. 10, 19..

Two years after date, for value received, I promise to pay T. M. Culver, or order, Four Hundred Forty Dollars at Second National Bank, interest at eight per cent, per annum. CHARLES HEARN.

**On Demand.**

Kansas City, Mo., Oct. 12, 19..

On Demand I promise to pay to the order of J. T. Connor, Twenty-Five 67-100 Dollars. Value received, with interest at six per cent.

A. H. SIMPSON.

NOTE.—This note answers the same purpose as a note written one day after date.

**Joint Note.**

$200.00. Lisle, Ill., Jan. 1, 19..

One year from date, we promise to pay D. F. Shaw, or order, Two Hundred Dollars. Value received. Interest at six per cent.

J. LEWIS BEAN.
B. A. WHITE.

**Joint and Several Note.**

$2,000.00. Ottawa, Ont., Nov. 25, 19..

Ten months after date, we, or either of us, promise to pay Maggie Patterson Two Thousand Dollars, value received. Interest at five per cent.

J. C. HARDY.
R. E. WOOD.

**Principal and Surety Note.**

New York, N. Y., Sept. 21, 19..

For value received, on or before July 27, 19...., I promise to pay to the order of Grover Cleveland, Six Hundred Dollars. Interest at nine per cent.

W. J. SHAW, Principal.
THOS. RODDEN, Surety.

Note.—The general form of a Principal and Surety is for the principal to properly sign the note, and the surety to endorse it.

**A Note by One Who Cannot Write.**

$49.50. Cleveland, Ohio, Mar. 20, 19..

One year after date, I promise to pay N. Bowker, or order, Forty-nine 50-100 dollars, with interest at eight per cent. Value received.

his
H. A. Starr, Witness. JOHN x ROURKE.
mark

N. B.—A note made by a person who cannot write should always be witnessed by a disinterested person.

**A Note by a Married Woman.**

$200.00. San Francisco, Cal., June 15, 19..

Two years after date, I promise to pay Fred Lueben, or order, Two Hundred Dollars, with interest at eight per cent., payable annually. Value received. MRS. MARY CHANDLER.

N. B.—A married woman could formerly incur no liability, but now the statutes of the various States give her more or less freedom to enter into contracts, and consequently her note can be enforced against her.

But in most States she cannot be bound by a note given to her husband, nor can he give a note to her. If she lends money to him and takes his note, a court of equity will oblige the husband to pay her, but the court of law will not.

**Chattel Note.**

$700.00. Earlville, Ill., Aug. 17, 19..

Thirty days from date, for value received, I promise to pay Walter J. Miller, or order, Seven Hundred Dollars in Warrenville Flour, at the then market rate, the same to be delivered at the option of the owner within the limits of the town of Earlville. C. D. CHAMBERS.

**My Own Order.**

New Orleans, La., July 20, 19..

For value received, I promise to pay, sixty days after date, to my own order, Two Hundred Dollars, with interest at eight per cent.

A. S. BARNARD.

NOTE.—A note may be drawn to the maker's own order, with his indorsement in favor of the creditor. This note then can be transferred without indorsement.

**Note Secured by a Mortgage.**

$1000.00. Chicago, Ill., April 15, 19..

Six months after date I promise to pay to John Williams $1000.00 with interest at seven per cent.

This note is secured by a deed of mortgage of even date herewith from Robert Jones to John Williams.

ROBERT JONES.

## B. Checks

5. **Definitions.**—A check is a bill drawn upon a bank, payable on demand. The person who writes the check is the **drawer,** the bank on whom the check is drawn is called the **drawee,** the person to whom the check is made payable is called the **payee.**

6. **Signature.**—A check must be properly signed. This is not a valid signature:

| | | |
|---|---|---|
| J. L. NICHOLS & CO. | or | JOHN JONES |
| By Treasurer | | By Agent |

It should be:

| | | |
|---|---|---|
| J. L. NICHOLS & CO. | or | JOHN JONES |
| By F. A. Lueben, Treasurer. | | By J. Keeler, Agent. |

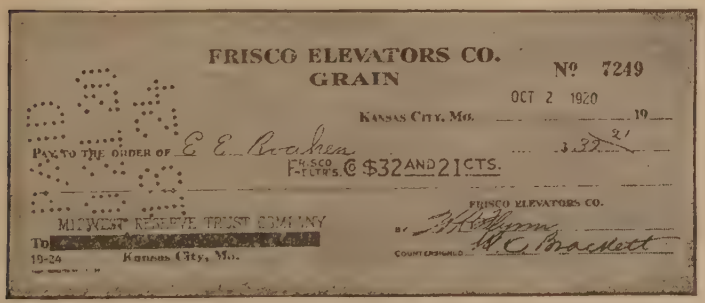
7. **Presentation.**—A check must be presented for payment within a reasonable time after its issue, or the drawer will be discharged from liability thereon to the extent of the loss caused by the delay; and it is generally held that one day after the receipt of the check is a reasonable time to present or forward the same for presentation.

8. **The Agreement to Pay** is between the bank and the depositor. For this reason a check, of itself, does not operate as an assignment of any part of the funds to the credit

of the drawer with the bank. Consequently, should the bank refuse to pay the check the holder cannot bring action against the bank, unless or until the bank has accepted or certified the check. On the other hand, if the bank fails to fulfill its contract with the depositor he has a just cause for action against the bank. Should the bank refuse to honor a customer's check owing to an employee's mistake in bookkeeping, the bank could be held responsible for any loss resulting therefrom.

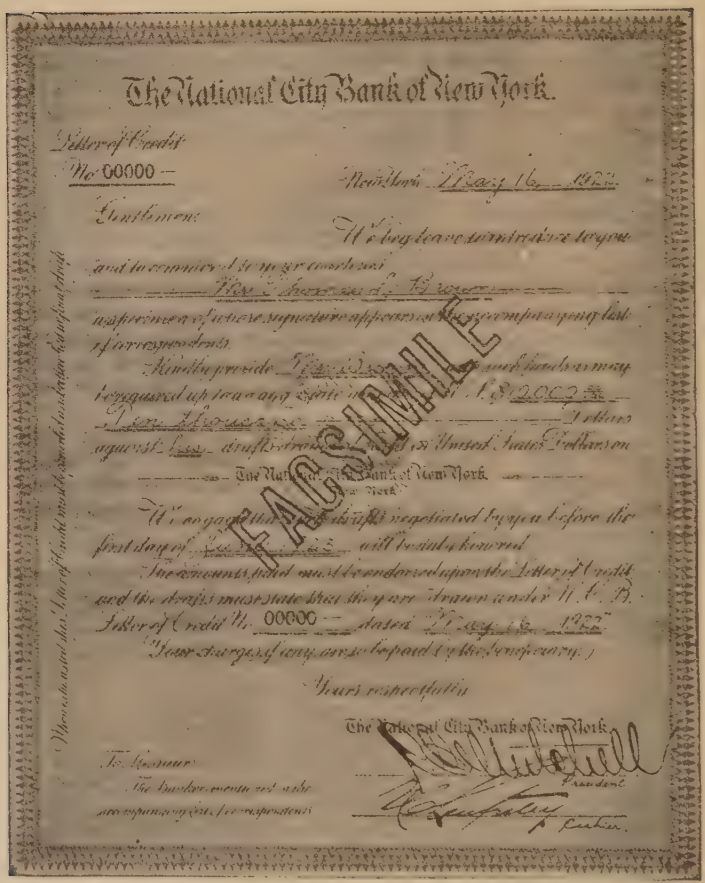
9. **Certifying a Check.**—A certification of a check by the bank is equivalent to an acceptance, and discharges the drawer and all the endorsers preceding the holder who secures the certification. When a check is presented to a bank for this purpose, the bank charges the drawer's account with the amount, so that as far as the drawer and the bank are concerned the check has actually been paid. Thus if a certified check is not presented at his bank for payment and is returned to the drawer, it should not be destroyed but redeposited as cash.

10. **Stopping Payment.**—The drawer of the check may order the bank to stop payment on a certain check before it is presented. The bank is required to follow out these instructions to the letter and is liable for any loss resulting from failure to do so.


FRISCO ELEVATORS CO.
GRAIN
Nº 7249
OCT 2 1920
KANSAS CITY, MO. 19
PAY TO THE ORDER OF E. E. Roahen $ 32 21
FRISCO ELTRS. @ $32 AND 21 CTS.
MIDWEST RESERVE TRUST COMPANY
TO [redacted]
19-24 Kansas City, Mo.
FRISCO ELEVATORS CO.
BY [illegible]
COUNTERSIGNED W. C. Brackett

This check was written on so-called safety paper. It was stolen from the mails, the two words "Grain Co." were erased from the payees name leaving it E. A. Roahen and it was paid by the bank although the maker had notified them to stop payment.

11. **Forged Checks.**—The law insists that the banker exercise the greatest care in paying the checks of customers. If the signature has been forged or the amount of the check



The National City Bank of New York.

Letter of Credit
No. 00000 —

New York May 16 1922

Gentlemen:

We beg leave to introduce to you and to commend to your courtesy

[illegible]

as specimen of whose signature appears on the accompanying list of correspondents.

Kindly provide [illegible] such funds as may be required up to an aggregate [illegible] $10,000 [illegible] Dollars against [illegible] drafts drawn on United States Dollars on

The National City Bank of New York
New York

We engage that such drafts negotiated by you before the first day of [illegible] will be duly honored.

The amounts paid must be endorsed upon the Letter of Credit and the drafts must state that they are drawn under N. C. B. Letter of Credit No. 00000 — dated May 16 1922.

(Your charges if any are to be paid by the beneficiary.)

Yours respectfully

The National City Bank of New York

President

Cashier

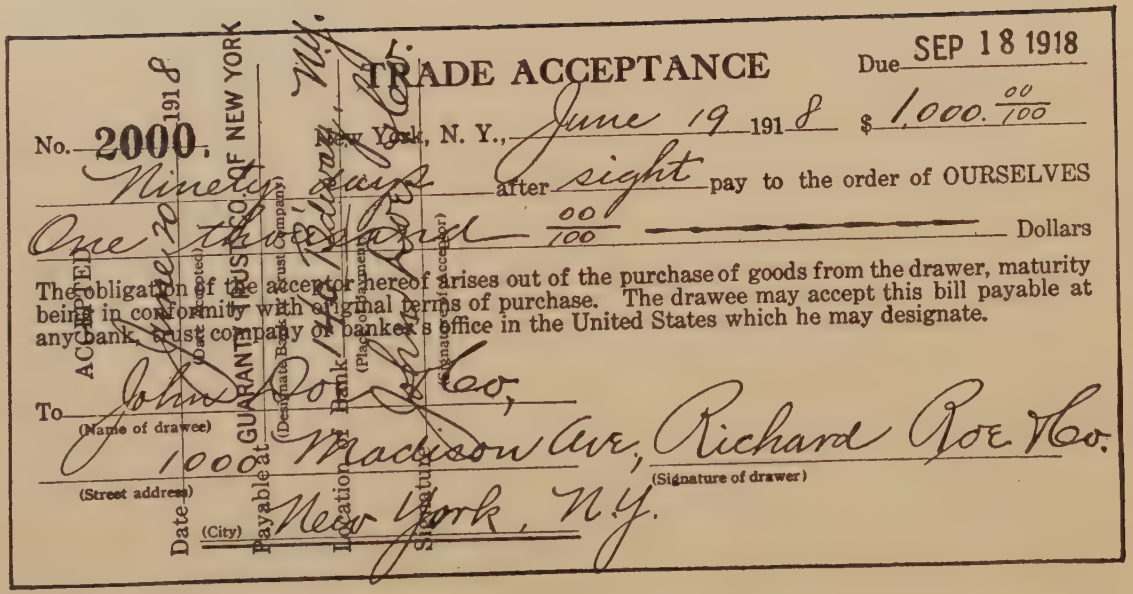
FACSIMILE

A TRAVELING BANK ACCOUNT WHICH IS SAFE, CONVENIENT, AND NEGOTIABLE. PAYMENTS ARE INSCRIBED ON THE OTHER SIDE.

"raised," the bank is liable for any improper payment. The drawer of the check must also use every precaution to prevent alterations. He should write in a way to avoid confusing the banker who is supposed to pay the check. Carelessness on the part of the drawer will relieve the banker of any liability. Another rule applies when checks have been altered or raised. The depositor must within a reasonable time after the return of his bank book, demand immediate correction if payments have been incorrectly made.

**12. Vital Points on Checks.**—A check is not due until presented. It is negotiable. It has no days of grace. Giving a check is no payment of an indebtedness, unless the check is paid. The death of the maker of the check before presentment to the bank renders the check null and void. The amount of the check should always be written out in words. Every holder of a check is liable to a subsequent holder only for the time for which he would be held, if originally liable. It is the safest rule always to act with diligence in presenting checks for payment. If a raised check is paid by the bank, it can only charge the depositor the amount for which he drew, unless the raising of the check was made possible by the carelessness of the maker. In that case the maker would be responsible for the loss.

If you have money in a bank and you wish to draw out a certain sum, write "Pay to myself," instead of writing your name in the body of the check, and then sign it. Banks of this country do not cash a check drawn payable to order unless the person presenting the check is known to the bank. If you write a check for a stranger who needs identification at your bank, have him indorse the check in your presence and under his indorsement write "Indorsement above guaranteed," signing your name. He can then cash the check without further identification by signing his name again in the presence of the banker. Another method is to write "Pay to Cash." Do not draw a check unless you have the money on deposit or in your possession to deposit. Do not presume on the generosity of your bank by drawing a sum larger than your balance.



ACCEPTED (Date accepted) GUARANTY TRUST CO. OF NEW YORK

# TRADE ACCEPTANCE

Due SEP 18 1918

No. 2000. New York, N. Y., June 19 1918 $ 1,000.00/100

Ninety days after sight pay to the order of OURSELVES

One thousand 00/100 Dollars

The obligation of the acceptor hereof arises out of the purchase of goods from the drawer, maturity being in conformity with original terms of purchase. The drawee may accept this bill payable at any bank, trust company or banker's office in the United States which he may designate.

To John Doe & Co.
(Name of drawee)

1000 Madison Ave,
(Street address)

New York, N.Y.
(City)

(Signature of drawer) Richard Roe Co.

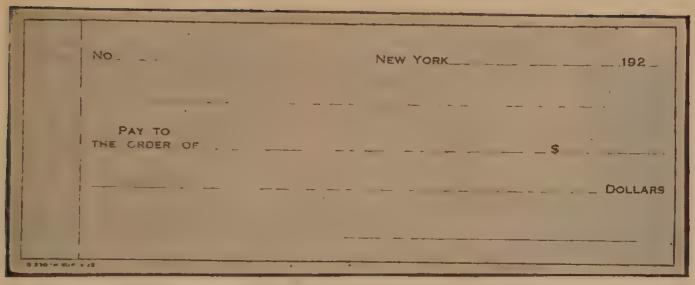
Date

Payable at (Designate Bank, Trust Company)

Location of Bank (Place of payment)

Signature (Manager or acceptor)

### A Blank Check




A great convenience for people who do not have their check book with them but find it necessary to draw on their account.

### Traveler's Check

A very convenient form of money to carry while traveling.

### C. Drafts

**13. Definition.**—A **draft** is a written order by one person on another for the payment of a specified sum of money. The one who writes the draft is called the **drawer**, and the one on whom it is written, the **drawee**, and the one to whom it is to be paid, **the payee.**

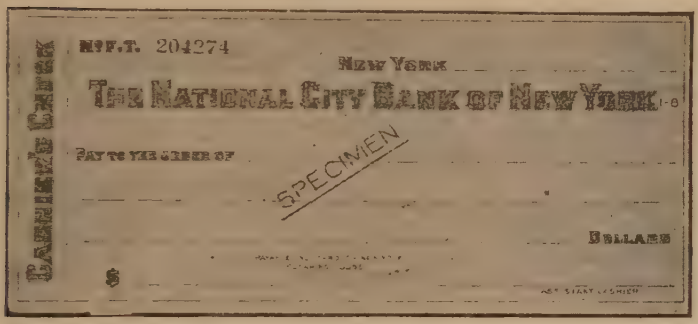
**14. Kinds of Drafts.**—Drafts may be made payable at sight, on demand or at a certain time after date, or after sight. A **sight draft** or **demand draft** is drawn on one person against another payable when presented. **Time drafts**

JOHN DOE
$1,000.00/100
Galveston, June 19 1918
Ninety days after sight pay to the order of
One Thousand
For value received
To Guaranty Co. of N.Y.
1401 Broadway
No. 2000 New York, N.Y.
John Doe
At time of acceptance this bill was accompanied by shipping documents evidencing the domestic shipment of goods against which it was drawn.
GUARANTY TRUST COMPANY OF NEW YORK
Vice-President
Asst. Secretary
Assistant Manager
PAYABLE AT 140 BROADWAY
NEW YORK JUN 20 1918
GUARANTY TRUST CO. OF NEW YORK
PAID
JUN 18 1918
DOCUMENTS
Surrender Co. of N.Y.

Bank Acceptance

are similar to sight drafts, but are payable a certain number of days after presentation. A Bill of exchange is a draft drawn on a foreign country. The Bank draft made by one bank upon another is the most common form.

A Cashier's Check




This form is used interchangeably with the regular Bank Draft.

15. **Acceptance.**—Sight and on demand drafts are presented for payment only. Time drafts require acceptance by the party against whom they are drawn. The usual method of acceptance is to write across the face of the draft in red ink the word "accepted," followed by the date and the signature. Should the person on whom the draft is drawn die before it was accepted, it should be prescribed to his legal representative for acceptance.

16. **General Principles:—**

a. When either acceptance or payment is refused, the draft may be protested like any other note or check.

b. Drafts are negotiable both before and after acceptance.

c. When buying a draft at a bank it is safest to have the draft made payable to yourself and then indorse it over to whomever it is to be made payable.

d. Any material alteration of a draft after it has been drawn or accepted makes it valueless.

### Forms of Drafts

1. **Bank Draft.**

$100. State of Illinois, May 16, 19..
The first National Bank of Naperville. Pay to the order of F. A. Lueben One Hundred Dollars.
To Union National Bank, W. L. HETZ, Cashier.
Chicago, Ill.
No. 46.

2. **On-Demand Draft.**

$100. Troy Grove, Ill., Aug. 1, 19..
On demand pay to the order of Frank Myers at the Mendota First National Bank, One Hundred Dollars.
Value received.
A. S. HUDSON.
To Charles Lerch,
Mendota, Ill.

3. **Sight Draft.**

$500. Naperville, Tenn., July 10, 19..
At sight pay to the order of C. Parman, Five Hundred Dollars, and charge to the account of
To Jesse Lerch, H. H. ZEMMER.
Meriden, Ill.

4. **Time Draft.**

$450.30. Ottawa, Fla., July 5, 19..
Ten days from date pay to J. L. Nichols, or order, Four Hundred Fifty 30-100 Dollars. Value received.
To Alvin Brown, C. E. LAMALE.
Ottawa, Fla.

### D. Indorsements

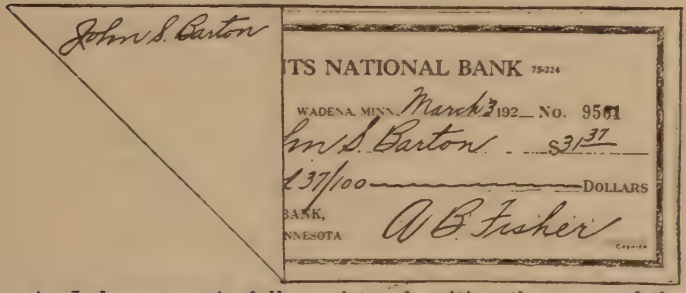
**17. Definition.** An indorsement is a writing on the back of a negotiable instrument for the purpose of transferring the title or ownership from one person to another. The writing may be in pen or pencil upon any part of the instrument or upon a paper attached thereto. It consists ordinarily of the payee's signature and that of other holders. When money is received on a bill or note, the amount is written on the back thereof and this is also called an indorsement.

**18. How to Endorse.**—Write across the back of the paper (not lengthwise) near the left end. Always endorse a check or note exactly as your name appears on the face. If the check is payable to F. Black, do not write Frank Black. If your name is misspelled, indorse first as it appers on the face and then write your correct signature underneath. Do not write any unnecessary information on the back of your check. A story is told of a woman who received a check from her husband, and when cashing it wrote "Your loving wife" above her name on the check.

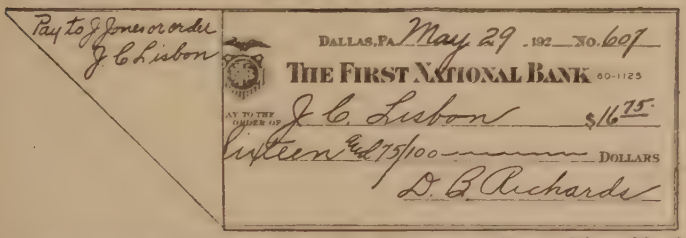
**19. Kinds of Endorsements.**—The same rules govern in-

dorsements of notes, checks, drafts and other written instruments.

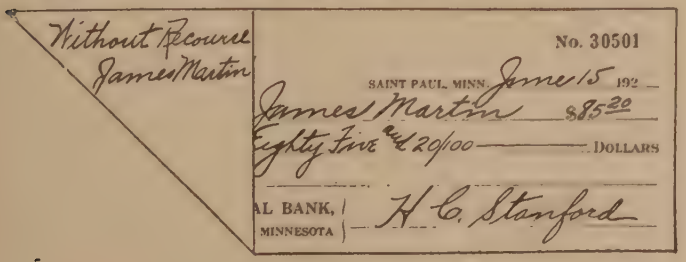
**An Indorsement in blank** is made by simply signing the payee's name in the proper place and delivering it to another person. Such a note or check is negotiable without further indorsement.



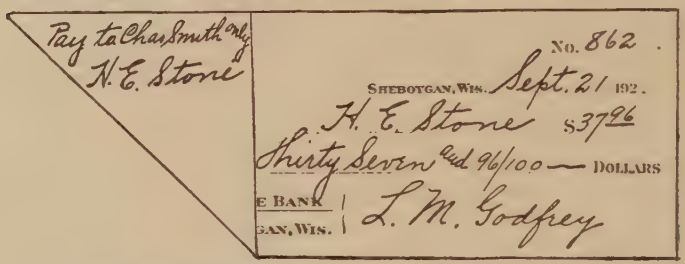

**An Indorsement** in full consists of writing the name of the person to whom, or to whose order the money is to be paid followed by the payee's signature. In the form below the check cannot be cashed until J. Jones indorses it.


Pay to J Jones or order
J C Lisbon
DALLAS, PA. May 29 192 No. 607
THE FIRST NATIONAL BANK
PAY TO THE ORDER OF J C Lisbon $16.75
Sixteen 75/100 DOLLARS
D B Richards

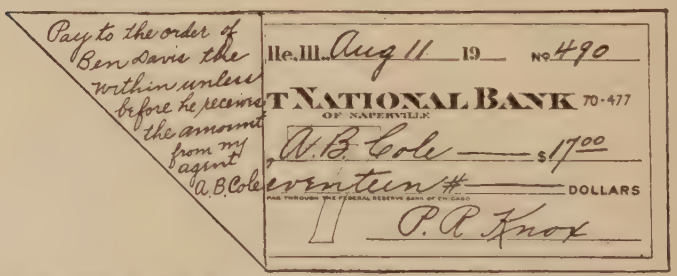
**In a Qualified Indorsement** the indorser relieves himself of any liability in connection with the instrument, thus:



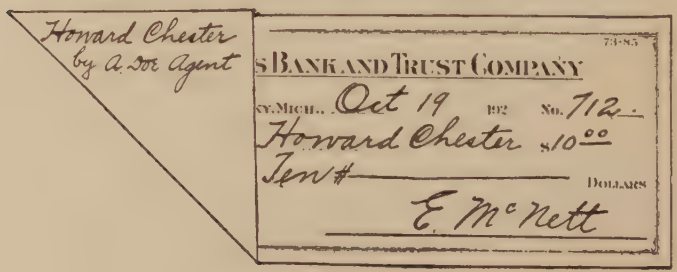
**A Restrictive Indorsement** restricts the payment of the note or bill. The indorser writes "pay Charles Smith only." or "for deposit in First National Bank," signing his name underneath. Such a note cannot be transferred.



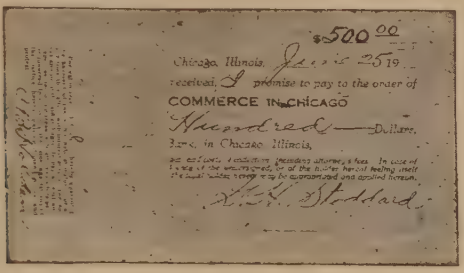

**A Conditional Indorsement** is one directing payment depending upon a certain occurence. Neither the original character of the note nor its negotiability is affected by such an indorsement. It affects only the title of the one to whom it is transferred.


Pay to the order of Ben Davis the within unless before he receives the amount from my agent
A. B. Cole
Ill. Aug 11 19 No. 490
NATIONAL BANK OF NAPERVILLE 70-477
A. B. Cole $17.00
seventeen
DOLLARS
P. R. Knox

**Indorsement by an Agent.**—The following form should be used by an agent when indorsing for his principal:



**A Guarantee on a Note.**—When one party guarantees payment on a note for another party, he indorses his signature on the back thereof.


$500 00
Chicago, Illinois, June 25 19
received, I promise to pay to the order of
COMMERCE IN CHICAGO
Hundred Dollars,
Bank, in Chicago, Illinois,
L. H. Stoddard

**Money Indorsement.**—When money is received on a note or other paper the amount should be indorsed on the back of the instrument itself:

Feb. 16th, 19.. Received on the within note Thirty dollars (30.00).

## E. Orders

An order is a written request to deliver money or goods to a person named, or to his order, or to bearer, the same to be charged to the person signing the request.

Orders are negotiable, but the person on whom they are drawn is not under obligation to pay them unless they have been accepted, for an order partakes of the nature of a draft.

$54.00. Baltimore, Oct. 14, 19..

Messrs. M. Brown & Co. will please pay to the bearer Fifty-four Dollars in goods, and charge the same to my account.

CLARA POWERS.

**In Full of Account.**

$25.00. St. Louis, April 13, 19..

C. A. Mather, Esq. :

Please pay John Rickert, or bearer Twenty-Five Dollars in goods, and this shall be your receipt in full of my account.

P. D. CRIMMINS.

**For Goods.**

Mr. W. W. Walsworth: New Orleans, March 4, 19..

Please send me per bearer ten barrels of Genesee Flour, and oblige,

Yours truly,

MINNIE HOWARD.

### An "I. O. U."

Chicago, Ills., Dec. 23, 19..

Mr. A. O. Roger,
I. O. U. Sixty Dollars ($60.00).
W. G. ALLEN.

The above is called an I. O. U. It is not a promissory note, but is evidence of a debt due by virtue of a previous contract.

### F. How to Write all Kinds of Due Bills

A due-bill is not generally payable to order, nor is it assignable by mere indorsement. It is simply the acknowledgment of a debt; yet it may be transferred. It may be payable in money or in merchandise.

Due-bills do not draw interest, unless so specified.

$125.00. Chicago, Aug. 14, 19..

Due Henry Harrington, for value received, One Hundred and Twenty-five dollars with interest. Q. YINZER.

**On Demand.**

$250.00. Naperville, Ill., July 1, 19..

Due E. E. Miller, on demand, Two Hundred Fifty Dollars in goods from my store, for value received. A. T. HANSON.

**In Merchandise.**

$1,000.00. Lincoln, Neb., Nov. 1, 19..

Due R. William, or order, One Thousand Dollars, payable in wheat at market price, on the first day of January next.
CHARLES SCHUERER.

### F. How to Write All Kinds of Receipts

20. A receipt is an acknowledgment in writing that a certain sum of money or thing has been received by the party giving and signing the same.

21. A complete receipt requires the following statements: That a payment has been received; the date of the payment; the amount of article received; from whom received, and if for another, on whose behalf payment is made; to what debt or purpose it is to be applied; by whom received, and if for another, on whose behalf it was received.

22. If the giving and receiving of receipts were more strictly held to in the transactions of the various kinds of business, less trouble, fewer law-suits, and the saving of thousands of dollars would be the result.

23. If payment is made upon account, upon a special debt, or in full, it should be so stated in the receipt.

24. When an agent signs a receipt, he should sign his principal's name and then write his name underneath as agent.

25. It is not necessary to take a receipt on paying a note, draft, or other instrument indorsed by the payee, because the instrument itself becomes a receipt.

26. If a receipt is obtained through fraud, or given under error or mistake, it is void.

**Receipt for Payment on Account.**

$250.00. Naperville, Ill., July 6, 19..

Received of J. L. Nichols, Two Hundred and Fifty Dollars on account.

J. K. ROHMER.

**Receipt for Settlement of an Account.**

Joliet, Ill., March 20, 19..

Received of Thomas Rourke, Two Hundred and Twenty 14-100 Dollars, in settlement of account to date.

C. S. SELBY.

**Receipt in Full of All Demands.**

Meriden, Conn., Jan. 14, 19..

Received of C. F. Hetche, One Thousand Dollars, in full of all demands to date.

O. N. OBRIGHT.

**Receipt for a Particular Bill.**

Brooklyn, N. Y., Aug. 1, 19..

Received of Morris Cliggitt, Four Hundred Dollars, in Payment for a bill of Merchandise.

R. ZACHMAN.

**Receipt for Rent.**

Snyder, Tex., Mar. 20, 19..

Received of L. Heininger, Forty Dollars in full for one month's rent, to April 20, for residence at 44 Olive Street.

J. LEWIS BEAN.

**Receipt for a Note.**

Received, Buffalo, March 6, 19...., from Messrs. Taylor & Co., their note of this date, at three months, our favor, for Twelve Hundred and Twenty Dollars; which, when paid, will be in full of account rendered to 1st instant.

$1,220.00.

C. H. OLIVER.

**Receipt for Service.**

Lemont, Ill., July 23, 19..

Received of Samuel Lynn, Forty-Four Dollars, in full for services to date.

$44.00.

DANIEL FURBUSH

**Receipt for Money Advanced on a Contract.**

$500.00. Chicago, Ill., May 10, 19..

Received of Arthur Kahl the sum of Five Hundred Dollars, part payment on contract to build for him a house at No. 1439 Perry St., Chicago.

CARL DIENST.

**Receipt for Interest Due on a Mortgage.**

$75.00. Chicago, August 1, 19..

Received of G. A. Caton, Seventy-five Dollars, in full of one year's interest, due this day, on his note to me dated August 1st., 19...., for Six Hundred Dollars, secured by mortgage No. 6.

EDWARD TRONT.

**Receipt for a Lost Note.**

$300.00. Fox Lake, Wis., May 15, 19..

Received of James H. Blackfoot, Three Hundred Dollars, in full payment for a certain note given by said James H. Blackfoot, dated May 12, 19...., calling for Three Hundred Dollars; which said note is lost, destroyed, or mislaid, and this receipt is a guarantee against future demands on account of said note.

I. M. TRUEHEART.

N. B.—Better never lose a note.

## COMMON LAW TRUSTS

1. **Definition.**—A common law trust company is a form of business organization founded on the common law right of contract. It is not created by statute, nor does it depend upon any specific enactment for its validity. These organizations are commonly called "Massachusetts Trusts," "Express Trusts," or "Business Trusts."

2. **Origin.**—The modern common law trust company must not be confused with "Trusts" or "Trust Companies." Certain large organizations are loosely called "Trusts," for example, "The Tobacco Trust," "The Steel Trust," etc. On the other hand many financial institutions handling estates and other probate matters are known as "Trust Companies." The Common Law Trust Company is simply another kind of business organization developed out of the common law trust relation, by which one person called the **trustor** could convey property to another person called the **trustee**, such property to be held, used and managed for the benefit of third persons.

3. **Formation.**—In forming a common law trust company the first step is to draw up the Declaration of Trust. This is in reality a contract between the trustors and the trustees, and takes the place of a charter in a corporation, or articles of co-partnership in a partnership agreement. It states the purposes of the trust, the period of its existence, the number and names of the trutees, the manner of choosing new trustees, etc. This declaration of trust also creates the Trust Fund or "capital" of the company, and conveys the property to the trustees, subject, of course, to the terms of

the agreement. The trustors receive "certificates of interest," very much like the certificates of stock which are issued by a corporation.

4. Recording.—The Declaration of Trust must be recorded in the Recorder's office of the County where the company was organized.

5. Cost of Organization.—There are no charter fees, franchise taxes, or capital stock taxes to pay such as are always required from corporations. Fifty or seventy-five dollars will cover the entire cost of preparing and recording the declaration of trust, drawing up the by-laws, and the purchasing of minute book, book of blank certificates, and official seal. There are a number of firms who make a specialty of organizing Common Law Trust Companies.

6. Compared With Corporations.—The advocates of the Common Law Trust Co. as a business organization claim that it has all the advantages of the other forms without any of their disadvantages. In the first place the Trust Company is much like a corporation in that the trustees control the business for a term of office, just as the directors of a corporation do. Secondly, the Trust Company may buy and sell, trade, manufacture and transport merchandise, may sue and be sued, under its trust name, exactly the same as a corporation. In the third place a common law trust company may do business anywhere, while a corporation being created by state law, is required to register and pay non-residence fees when doing business outside the parent state. Fourthly, the state laws regulate the nature of the business in which a corporation may engage, whereas, a common law trust company may be organized for any purpose for which it would be lawful to make a contract. And, finally, the common law trusts are not subject to any of the excise or franchise taxes that are levied against corporations. They pay only such taxes as would be levied against an individual.

7. Compared to Partnerships.—In a partnership each general partner has an equal share in the management of partnership affairs. In the Common Law Trust Company the holders of the interest shares have no voice whatever in the management. The trustees must have the legal title to all the property and the sole control of the business during their term of office. If this rule is ignored the courts will consider the trust as nothing more than a partnership.

Again, the death or resignation of a general partner, automatically dissolves the partnership agreement, requiring the settling up of all partnership affairs, and often greatly inconveniencing the remaining partners. In a common law trust company this is all done away with, as the removal of one of the interested parties has no effect whatever upon the organization. Beneficial shares may in fact be sold or transferred just like stock in a corporation or like any other personal property. These are the two principal ways in which a common law trust company differs from, and is an improvement upon, the partnership.

8. **Disadvantages.**—The most unsatisfactory thing about a partnership is that each general partner is personally liable for the debts of the firm. Stockholders, on the other hand, are not liable for the debts of the corporation. Now if the holders of the interest shares in a common law trust company were equally free from personal liability, this would indeed be the ideal form of business organization. But, unfortunately, this is not the case. The trustees are liable for the debts of the company. Of course, the money comes out of the trust fund, but if there does not happen to be sufficient funds in the trust fund, then the individual members are held liable, unless there happens to be a specific agreement with each creditor. The making of such agreements, however, would be a great handicap in the conduct of the business.

9. **The Best Form.**—In studying the various forms of business organization it will be seen that there are advantages and disadvantages in each one. Just which form is the best to adopt will depend to a large extent upon the nature of the business in which it is desired to engage.

## CONTRACTS

1. **Definitions.**—A contract is a mutual agreement between two competent parties for a valuable consideration to do or not to do a particular thing. A **Simple Contract** may or may not be in writing but requires no seal. A **Specialty** is a contract in writing which does require a seal to the signatures. **An Executed Contract** is completed, **an Executory Contract** is one to be executed or completed. **An Express Contract** is a contract actually made between two or

more parties; **An implied Contract,** as the name suggests, is one in which some of the provisions must be implied from previous agreements or from existing customs.

2. **Requirements.**—A contract must have:

a. Two or more parties,
b. Subject matter,
c. Seal or consideration, and
d. Assent of the parties. There cannot be a contract when any of these are wanting.

### How to Write a Contract

3. The parties to a contract are taken in the order in which they are written and referred to as "the party of the first part," "the party of the second part," without repeating their names. It matters not which name is written first.

4. After writing the date, names of the parties and their places of residence, state fully all that the first party agrees to do, and then state all that the second party agrees to do.

5. Next state the penalties of forfeitures in case either party does not faithfully and fully perform, or offer to perform, his part of the agreement.

6. Finally, the closing clause, the signatures and seals, the

A VERBAL CONTRACT BETWEEN FRIENDS

signatures of witnesses are written. (A seal is simply the mark of a pen around the word "seal," written after the signature.)

7. No particular form of legal language is necessary. Use your own words and state in a plain way just what you want done. Any one who can write a letter and express his desire in an intelligent manner can write a contract.

8. Errors in grammar or spelling do not affect the legality of the agreement.

9. If the language should be obscure on certain points, the "court" will always interpret the intent of the parties, when they entered into the agreement, provided the intent can be gathered from the terms of the instrument itself.

10. When an agreement is written it must all be in writing. It cannot be partly written and partly oral.

### The Vital Part of a Contract—Consideration

**11. Definition.**—A consideration is the thing which induces parties to make a contract. It is the substantial cause or reason moving parties to enter into an agreement.

**12. A Sufficient Consideration.**—The law does not require that the consideration should be a good or bad bargain. As long as something is done or suffered by either party the consideration is good. The smallest consideration is sufficient to make it legal. The value of the consideration is unimportant. For instance: $10,000 worth of property can be sold for $1.

**13. Promise of Marriage.**—If a man promises a woman any certain sum of money if she would agree to marry him, he can be made to fulfill his promise, and then the court will hold that the promise of marriage was a sufficient consideration for the money. Marriage contracts may be entered into under age.

**14. A Valuable Consideration.**—A valuable consideration is one which is equal to money or may be changed into money.

**15. A Good Consideration.**—A good consideration is one which is based upon love, gratitude or esteem, or blood relationship. But in order to make a good consideration legal, the agreement has to be performed by one or both parties. For instance: If a man should promise to give a lady $500 because he loved her, it could not be collected, but if the

money was once paid to the woman it could not be recovered.

16. **Gratuitous Consideration.**—A gratuitous consideration is a consideration where something is done or money promised on account of some affection or charity, and like a good consideration the act must be performed in order to hold the party. For instance: If a father gives his son a note on account of his affection for him, the son cannot force the father to pay it; so also if a person subscribes for a church or charitable society he cannot be compelled to pay it, unless the church or charitable society can show that it depended upon that money when it entered upon some contract, or assumed some obligation on account of it.

17. **Immoral Consideration.**—All considerations which are immoral are consequently illegal.

18. **Impossible Consideration.**—If a man should promise to cross the ocean in one day, or walk from Philadelphia to New York in two hours the consideration is illegal and void.

## The Law Governing All Kinds of Contracts

19. An alteration of a contract in a material part, after its execution, renders it void.

20. A contract made by a minor, a lunatic, or an idiot is not binding upon him, yet he can hold the party with whom he contracts, to all the conditions of the contract.

21. A fraudulent contract may be binding on the party guilty of fraud, although not laying any obligation on the part of the party acting in good faith.

22. A contract for the sale or purchase of personal property over a certain amount—ranging from $30 to $100 in the different States—must be in writing.

23. A contract which cannot be performed within a year must be in writing.

24. If no time of payment is stated in the contract, payment must be made on the delivery of the goods.

25. A contract totally restraining the exercise of a man's trade or profession is void, but one restraining him in any particular place is not void.

26. An offer or proposal, which includes the essential parts of a contract, becomes a contract as soon as accepted. Generally the acceptance must be at the time of receiving

the offer. The offer may be withdrawn at any time before it has been accepted. Offers may be made and accepted within a reasonable time by word of mouth, telephone, telegraph, or mail.

27. A contract required by law to be in writing cannot be dissolved by verbal agreement.

Babylon Clay Tablet Contract. (The Outer Case Has Been Broken Away Showing the Inner Repetition.)

28. A contract cannot be rescinded except by consent of both parties.

29. An oral contract must be proved by evidence.

30. A contract binding in the place where it is made is binding everywhere.

31. Each party to an agreement or contract should retain a copy.

32. While signatures or contracts written with a pencil are good in law, it is always safer to write them in ink.

### Contracts That Are Not Lawful

33. A contract to commit a breach of peace.

34. Contracts made on Sunday, are, in most of the States, now held to be legal and binding.

35. An agreement for immoral purposes.

36. All agreements in which there is a fraud.

37. An agreement made by threats or violence.

38. Wagers or bets cannot be collected by law.

39. More than legal interest cannot be collected.

40. If any part of a contract is illegal, the whole is illegal.

41. A contract with an intoxicated person, lunatic, or minor.

42. A contract in violation of a statute in the State in which it is made.

43. An agreement to prevent competition on a sale under an execution.

44. An agreement to prohibit the carrying on of a trade throughout the State.

45. A contract impossible in its nature; such as crossing the ocean in one day, is void.

46. Where consent to an agreement is given by mistake, it cannot become a contract.

47. The right to vote or hold office, etc., cannot be sold by contract.

48. Contract without a consideration; such as a promise to make a gift, cannot be enforced.

49. Two or more persons cannot intentionally make a contract to the injury of a third person.

50. Contracts for concealing felony or violating public trust, for bribery and extortion, are prohibited.

51. Useless things cannot become the subject of a contract; such as agreeing not to go out of the house for a month.

52. Money borrowed for the purpose of betting, the lender knowing it to be for that purpose, cannot be collected.

53. A verbal release without payment or satisfaction for the debt is not good. Release must be under seal.

54. If there are two parts to a contract, the one conflicting with the other, the first part holds good in preference to the last.

55. Contracts in which there is misrepresentation or concealment of material facts cannot be enforced. It is fraud to conceal a fraud.

56. If a thing contracted for was not in existence at the time of making the contract, such as buying a horse and not knowing that he was dead at the time, the contract is not good.

57. If a person agrees to serve as a laborer or clerk, he cannot be compelled to fulfill his agreement; damages, however, can be recovered for a failure to perform.

58. An agreement with a thief to drop a criminal prosecution, by his bringing back the goods and paying all damages, is not good, and will be no bar to a future prosecution.

59. Guardians, Trustees, Executors, Administrators or Attorneys cannot take advantage of those for whom they act by becoming parties to contracts in which their wards are interested.

60. **Quasi Contracts.**—A quasi contract may be defined as almost a contract or partly a contract. It is a legal obligation resulting from some direct or indirect benefit accruing

to one party from the other without his assent. The law compels him to pay. For example:

a. One who has reason to believe that payment for goods tendered is expected, must not accept them unless he intends to pay for them.

b. A man employed under the promise of good wages or division of profits is entited to fair treatment, even though such a contract is no contract at all.

c. Money paid on an illegal contract or on one which is void because of non-existence of the property, may be recovered.

d. If an express company deliver valuable goods to the wrong party, the company can recover from the person who wrongfully accepted them.

e. If, on account of a mistake a man pays his grocery bill twice for the same month, he can recover.

f. Action to recover can be brought against a man who sells property not his own, or which proves to be worthless.

g. All these questions hinge on the presence or lack of consideration in the agreement.

h. A liability of this kind cannot be imposed upon a person without his act or consent.

61. **Statute of Frauds.**—In every state there is a statute called the statute of frauds which provides that certain contracts must be in writing to bind the parties: Thus:—

a. All agreements for the sale of real estate are void unless they are in writing.

b. A contract for the sale of goods exceeding the sum of from $30.00 up to $100.00 according to the several states, must be in writing or else there must be actual delivery and acceptance of the goods.

c. A contract must be in writing to charge the defendant upon any special promise to answer for the debt, default or miscarriage of another person.

d. A written contract is necessary to charge any person upon any agreement made upon consideration of marriage, or upon any agreement that is not to be performed within the space of one year from the making thereof.

What actually constitutes delivery and acceptance is a question of fact and depends on the intention of the parties.

### Damages For Violation of Contract

62. A statute which provides no penalties for the law-breaker is merely the expression of a wish, or the giving of advice. Similarly the contract must be binding on both parties. This element of mutual obligation is the very essence of a contract.

63. Where no actual loss has been sustained by the violation of a contract, the plaintiff is entitled to nominal damages only. Thus, A contracted to drill a well for B and to complete same within a specified time or forfeit $1000.00. The courts will not compel A to pay the $1000.00 damages unless his failure to complete the well has actually meant a loss of $1000.00 to B.

64. Actual expenditures under the contract may be recovered.

65. Expected profits or speculations in real property cannot be recovered in case of a violation of contract.

66. Failure to convey real estate or deliver personal property according to agreement entitles the plaintiff to recover damages or to sue for specific performance of the contract.

67. In loss of goods by common carrier the plaintiff is entitled to the value of the goods where they were to be delivered, less the freight on such goods.

68. If a party contracts to employ another for a certain time, at a specified compensation, and discharges him, without cause, before the expiration of the time, the plaintiff can obtain judgment for the full amount of wages for the whole time, provided he is unable to secure employment in the same line of work, after making an earnest effort to do so. Should he obtain work at a lower wage he can collect the difference.

69. To prevent lawsuits and disputes the amount of damages for the violation of contracts is sometimes fixed by inserting in the contract the following clause:

> AND IT IS FURTHER AGREED that the party that shall fail to perform this agreement on his part shall pay to the other the full sum of (here state amount), as liquidated, fixed, and settled charges.

70. The general rule is that the courts seek to do justice between the parties.

## Forms of Contracts

### General Form of Agreement.

This agreement, made the tenth day of June, 19...., between Clarence Ranck of Aurora, County of Kane, State of Illinois, of the first part, and Charles Vandersall of Columbus, Ohio, of the second part: Witnesseth, that the said Clarence Ranck, in consideration of the agreement of the party of the second part hereinafter contained, contracts and agrees to and with the said Charles Vandersall, that (here insert the agreement of Clarence Ranck). And the said Charles Vandersall in consideration of the fulfillment of this contract on the part of the party of the first part, contracts and agrees with the said Clarence Ranck (here insert the agreement on the part of Charles Vandersall).

In case of failure of agreement by either of the parties hereto it is hereby stipulated and agreed that the party so failing shall pay to the other Two Hundred Dollars as fixed and settled damages.

In witness whereof, we have hereunto set our hands and seals, the day and year first above mentioned.

Signed and sealed
in presence of
John Rutter.

CLARENCE RANCK.
CHARLES VANDERSALL.

### Contract Concerning Party Wall.

This agreement, made this ..... day of ....., 19...., by and between Harry Morgan and James White, of the city of..... ....., witnesseth: That, whereas, the said James White is the owner of the house and lot on the south side of ..... Street, second lot east of ..... Street, and the said Harry Morgan is the owner of the lot adjoining the same next easterly thereof, on which said lot there now stands a party wall on a line parallel with ..... Street; and forty-four feet easterly from said ..... Street; and, whereas, the said Harry Morgan has erected his dwelling-house several feet (one story) higher than the said James White, whereby greater advantage may accrue to the said Harry Morgan from said party wall. Now, therefore, the said James White in consideration of the sum of $1, to him in hand paid, the receipt whereof is hereby acknowledged, doth grant, covenant, promise, and agree with the said Harry Morgan, that he may peacefully and lawfully enjoy such party wall, to himself, his heirs, and assigns, the said James White reserving to himself the right to use the said portion of the party wall built by the said Harry Morgan, whenever he may wish to build higher than his house now is.

It is further mutually understood and agreed, between the respective parties, that this agreement shall remain so long as the houses last, and shall pass to the heirs and assigns of the respective parties to these presents.

Witness our hands and seals, the day and year first above written.

HARRY MORGAN.
JAMES WHITE.

### Agreement For Building.

This agreement, entered into this ..... day of ....., 19...., between Carl Hudson and Allen Powers Witnesseth: That the said Carl Hudson hereby agrees with the said Allen Powers to erect for him on (described land) a (dwelling-house) in conformity with the drawing and detailed specifications of one Richard Coon, architect, the work to be performed in a substantial and workmanlike manner, and with the best

materials of their respective kinds, the same to be furnished, together with all things necessary to erect and complete said building, at the cost and expense of the said Carl Hudson, payments to be made as follows: (specify terms) upon the certificate of the architect, provided that said estimates shall not at any time before the completion of said building exceed the basis of 85 per cent of the value of the work so executed.

And the said Allen Powers hereby agrees with said Carl Hudson to pay to him the sum of $..... for the erection and completion of said building in the manner aforesaid, (monthly) estimates to be made by said Richard Coon, architect, of the amount then due to said Carl Hudson thereon, upon the presentation of which estimate said Allen Powers agrees to pay 85 per cent of the same, the remaining 15 per cent to be retained until the completion of said building. And on the completion of said work in the manner aforesaid to the satisfaction of said architect, and upon the presentation of his certificate to that effect, said Allen Powers agrees to pay said Carl Hudson the balance remaining unpaid on said contract, including the fifteen per cent retained until the competion of the work. The said Carl Hudson further agrees to complete said building as aforesaid and deliver the same to said Allen Powers on or before the ..... day of ....., 19....

In witness whereof we have hereunto set our hands this..... day of ....., 19....

CARL HUDSON.
ALLEN POWERS.

### Contract For Hiring Farm Labor.

This agreement, entered into this ..... day of ....., 19...., by and between John Jones and Harry Wheeler, Witnesseth: That the said John Jones agrees faithfully to labor for Harry Wheeler for the term of ..... months from the first day of ....., 19...., at farm labor, on the farm of said Harry Wheeler, in ..... county, and to perform such other services as may be reasonable and just, for which services said Harry Wheeler agrees to pay said John Jones the sum of $..... per month (on the ..... day of ....., 19....)

In witness whereof we have hereunto set our hands this..... day of ....., 19....

JOHN JONES.
HARRY WHEELER.

### Contract For Laying Tile or Building Fence.

This agreement, made this first day of July, 19...., between W. J. Shaw, of the first part, and A. N. Jenkins, of the second part, Witnesseth: That the said party of the first part agrees to lay upon the farm of the said party of the second part, of Naperville Township, Du Page County, Illinois, 120 rods of six-inch tile at such places on said farm as the said party of the first part may designate for the sum of ..... per rod, said tile to be so laid that there shall be sufficient fall to properly drain the land through which the same is laid. And all ditches to be properly filled by the party of the first part; and the said party of the second part agrees to pay said party of the first part one-half the consideration above expressed when he has laid 60 rods of said tiling and the remainder on completion of the contract.

Witness the hands of the parties hereto the day and year above written.

(Signed) W. J. SHAW.
A. N. JENKINS.

### Contract For the Sale of Horses, Cattle, or Other Personal Property.

This agreement, between A. B. Johnson and C. D. Coddington, made this nineteenth day of October, 19...., Witnesseth: That said A. B. Johnson, for the consideration hereinafter mentioned, shall sell and de-

liver on the first day of November next to said C. D. Coddington at his residence, One Double Wagon, Two Four-Year-Old Colts and Six Yearling Heifers.

That said C. D. Coddington, in consideration thereof, shall pay said A. B. Johnson..... Dollars, upon the delivery of said property.

In witness whereof we have this day set our hands and seal.

A. B. JOHNSON.
C. D. CODDINGTON.

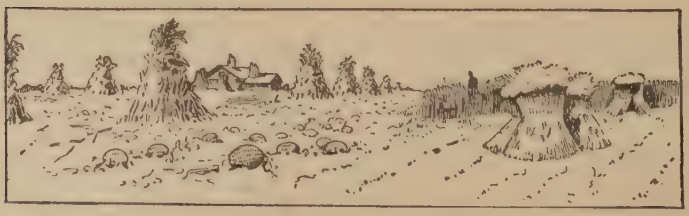
**Seed Contract.**

(To be used by seed or grain merchants selling on credit to farmers.)

Know all Men by these Presents, that ....., ..... ..... of the Town of ..... in the County of ..... and State of ....., part.... of the first part, acknowledge.....to be indebted to..... of County of..... and State of ....., party of the second part, in the sum of ..... ($.....) Dollars, with interest at the rate of ..... per cent per annum from date hereof until paid, which said sum is due and payable on account and for the purchase and delivery of ..... (here insert No. of Bushels or pounds of grain, etc.,) this day purchased from and delivered by the party of the second part, receipt whereof is herewith acknowledged and which indebtedness is further evidenced by a certain promissory note of even date herewith.

For the purpose of securing the payment of the above indebtedness the said part..... of the first part hereby covenant..... and agree .....that the said party of the second part, shall have a lien in the nature and to the effect of a chattel mortgage upon all the produce or grain raised and produced by said part..... of the first part, and the part.....of the first part hereby mortgages the same to the party of the second part; and in case the part.....of the first part shall fail to pay the above said sum with interest at the time of harvesting the grain or produce raised by said part.....of the first part, a reasonable time for delivery of the same to market being excepted, the party of the second part shall have the right and power to take possession of said produce or grain, wherever it may be found, and sell the same at private sale or public auction for the best prices obtainable, after giving at least.....days notice of the time and place of said sale by posting a written notice thereof in two or more public places in the township of .....Out of the money arising from such sale the party of the second part shall retain the amount of money due under this contract, together with all costs and charges of such sale, and the surplus, if any, shall be paid to the part.....of the first part.

In witness whereof the parties hereto have set their hands and seals this .....day of ....., 19....



## COPYRIGHT

**1. Definition.**—Congress has defined copyright as the liberty of printing, publishing, compiling, executing and vending any original book, map, chart, dramatic or musical composition, engraving, print, photographs, or negative thereof, or of a painting, drawing, chromo, statue, or statuary, and of models or designs intended to be perfected as works of art.

**2. Application.**—Persons seeking registration of any work must specify to which of the following classes the work belongs:

(a) Books, (b) periodicals, (c) lectures, sermons, addresses prepared for oral delivery, (d) dramatic compositions, (e) musical compositions, (f) maps, (g) works of art, models, or designs, (h) reproduction of a work of art, (i) drawing of plastic works of a scientific nature, (j) photographs, (k) prints and pictorial illustrations, (l) motion picture photo plays, (m) motion pictures other than photo plays.

**3. Protection.**—The copyright of an article or publication gives the owner of it the exclusive right to print, translate, reproduce, or dramatize it. Thus if a book is copyrighted it cannot be copied or quoted in any other publication without the consent of the holder of the copyright.

**4. How to Obtain a Copyright for a Book or Magazine.**—

a. Publish the work with the copyright notice.

b. Send to "The Copyright Office, Library of Congress, Washington, D. C.," two copies of the best edition of the work with an application for registration, and the statutory fee of $1.00.

c. Make affidavit that the typesetting, printing, and binding have been performed in the United States. (See form at end of chapter.)

**5. How to Obtain Copyright for Other Articles.**—Different rules apply for works not reproduced in copies for sale. The fee is $1.00 and application must be made in the regular way. Applicant must send:—

a. In the case of lectures, or dramatic or musical composition, **one complete manuscript or typewritten copy** of the work.

b. In the case of photographs not intended for general circulation, **one photographic print.**

c. In the case of works of art, **the photograph or other identifying reproduction of the work.**

d. In the case of motion picture photoplays, **a title and description with one print** taken from each scene or act.

e. In the case of motion pictures other than photoplays, **a title and description with not less than two prints** taken from different sections of a complete motion picture.

Upon publication of any of the above, a second deposit of printed copies for registration and the payment of another fee are required.

6. **Notice of Copyright.**—The notice of copyright consists of the word "copyright" (or Copr.) with the name of the proprietor and the year in which the copyright was secured. In the case of books this notice should appear on the title page, or the page immediately following. In the case of pictures, maps, photographs and the like, the notice may consist of the letter C enclosed in a circle, thus (C), accompanied by the initials, monogram, mark, or symbol of the owner.

7. **How Long is a Copyright Good.**—A copyright is good for 28 years from date of publication. Within one year preceding the expiration of the term, the author, or his heirs or executors may secure a renewal of the copyright for another 28 years. In the case of composite works, if the proprietor secured the original copyright, he may also secure the renewal.

8. **Assignments.**—A copyright may be assigned by any instrument in writing, but such assignment to be valid must be recorded in the copyright office within three months after its execution in the United States or within six months after its execution outside the United States. Every assignment of copyright executed in a foreign country must be acknowledged before a consular officer of the United States.

9. **Infringement.**—Any person who wilfully and for profit infringes any copyright or assists in such infringement is guilty of a misdemeanor, punishable by imprisonment for not exceeding one year, or by a fine of not less than $100 or more than $1000, or both. In addition the owner of the copyright has both a legal and an equitable remedy in that:—

a. He can compel the wrongdoer to pay the damages sustained and any profits he may have made from the infringement.
b. He can get out an injunction restraining the wrongdoer from infringing the copyright.

**10. Foreign Copyrights.**—Registration in the Copyright Office of the United States does not insure protection in European countries, because the United States is not a member of the International Copyright Union. In order to secure copyright abroad it is necessary to comply with the law and administrative regulations of the country in which such protection is desired. As the requirements vary the practical course for one wishing such protection is to secure the services of a publisher or agent in such country to transact his copyright business.

Upon obtaining valid copyright in one of the countries belonging to the International Copyright Union, such as Great Britain or France, copyright is also secured in the other countries belonging to the Union.

**11. Fees.**—The fee for copyrighting any work is $1.00 which includes a certificate of registration under seal. Each additional certificate or copy under seal costs fifty cents. The fee for renewal of copyright is fifty cents. The fee for photographs is fifty cents if a certificate is not requested. For recording and certifying an assignment of a copyright, or for a certified copy of an assignment, the fee is $1.00 if the instrument is not over 300 words; $2.00 between 300 and 1000 words; and $1.00 extra for each additional 1000 words and fractions thereof over 300 words. Only one fee is charged when more than one volume of the same book is deposited in the copyright office at the same time.

**12. Form of Affidavit.—**

STATE OF IOWA, COUNTY OF POLK, SS.

....., being duly sworn on his oath, states that the ..... entitled ..... submitted herewith for registration under the Copyright Laws was set in type, printed and bound in the United States of America. (Signed)

Subscribed and sworn to before me this .. day of .. ..

A.D. 19..... Notary Public.

(My commisssion expires ..... 19..... )

## CORPORATIONS

1. **Definition.**—A corporation is a body created by law, composed of individuals, united under a common name, and having succession while it shall exist. It is the creature of the law, and derives all its powers and capacities from the law of its creation.

2. **Kinds of Corporations.**—Corporations known as **Business Corporations** are the most common. Railroad corporations, and other public service corporations, though performing a public service are nevertheless **Private Corporations.** Then there are **Religious, Charitable** and **Beneficial Corporations,** usually organized for beneficial purposes, not for profit. **Quasi Corporations,** such as school districts, resemble corporations in some ways. They can own and manage real estate, make contracts, sue and be sued like any other corporation. A **Close Corporation** is one where the capital stock or ownership is confined to one family or distinct group of individuals.

**3. Formation of Corporation.**—First, write the Secretary of State in your State for a copy of the corporation laws, and full information. Second, file with the Secretary of State a statement giving name, object, amount of capital stock, location of office, and duration. Third, as soon as a license is issued, and the stock subscribed for, hold a meeting and elect directors. State laws vary but usually three or more individuals may form a corporation. Charters are granted for a limited number of years. Corporations created in one State may transact any lawful business in another state, and they can acquire and transfer property as individuals. They are called foreign corporations.

**4. Life of a Corporation.**—A corporation exists to the end of its charter unless it fails or is discontinued for other good reasons. The stockholder's rights pass from one to another by sale or by inheritance. Should one stockholder acquire all of the issued stock, the corporation would cease to exist after a limited time, and would be regarded as an individual.

**5. Capital Stock.**—Corporations have assets composed of money, real estate, buildings, machinery, patents, copyrights, etc. The capital is paid in by members. Capital stock is divided into parts called shares, and the owners of the shares are called stockholders. By this method of promotion the necessary money for the enterprise may be collected from many different sources, and unlike a partnership the individual stockholders are not personally liable for the debts of the corporation. In large measure these facts account for the great popularity of the corporate form of organization. Corporations may increase or decrease the amount of their capital stock, provided the change is made in good faith, without intent to defraud.

**6. Who May Subscribe For Stock.**—Anyone capable of making a contract may subscribe for the stock of a corporation. Minors are excluded, as well as married women in some states. However, there is no law to prevent subscription for stock by a friend and later making an ordinary transfer. Where fictitious subscriptions are used to induce others to buy, the purchaser may refuse to pay his subscription. If already paid for he may recover the money, or he may keep the stock and sue for damages.

**7. The Stock Certificate** is a written statement of the number and par value of the shares to which the holder is

entitled. In other words, it is the evidence of ownership. A stockholder may prove ownership even though a certificate has never been issued him. When the capital stock of a corporation is increased each shareholder usually has the right to purchase his proportion of the new stock.

**8. Preferred Stock.**—This kind of stock takes preference over the ordinary or common stock of a corporation, and the holders are entitled to a stated per cent, annually out of the net earning before a dividend can be declared on the common stock. Preference rather than actual payment is guaranteed. Preferred stocks are generally the result of reorganization, although sometimes issued in payment of floating or unsecured debts. Preferred shareholders are not liable for the debts of the corporation. They usually have the right to vote at any stockholder's meeting.

**9. Common Stock** is the ordinary stock of a corporation. The holders are entitled to all the rights incident to their ownership.

**10. Transfer of Stock.**—This is provided for by statute. Usually the seller must assign the certificate to the transferree, execute a power of attorney and deliver the certificate to the company for registration. The transfer agent then issues a new certificate to the purchaser.

**11. A Subscription For Stock is a Contract** and must be in writing. An agent cannot refuse to receive a subscription from a competent person, neither can he release a subscriber or alter the terms of the contract. The subscriber must inform himself as to his obligations and cannot evade payment unless he can prove fraud.

**12. A Corporate Lien.**—A corporation cannot secure a lien on a shareholder's stock to cover the owner's personal indebtedness. The National Banking Law prohibits this, yet a bank may hold out a shareholder's dividend to apply on his indebtedness at the bank.

**13. The Shareholder's Liability.**—As stated previously a corporation differs from a partnership in that the shareholders in a corporation are liable only for the amount of stock they own. Each member of a partnership is liable for all the debts of the concern. However, in the case of National Banks the shareholders are liable for the amount or just double the amount of their holdings in case the bank fails and that much money is required to pay the debts. A large surplus earned or paid in advance has no effect on this

fundamental liability. The amount of stockholder's liability is fixed by statute in the several states. A stockholder in any corporation is liable for the full amount of his stock, whether paid in full or not.

**14. Receivership.**—When a corporation fails a receiver is appointed by the court to settle up its affairs. The receiver has the power to convert the property into cash, levy and collect assessments from the shareholders, where authorized by law, and pay dividends to the creditors, as in the case of bankruptcy proceedings. The receiver may be an individual, a group of individuals, or a trust company.

**15.—Management.**—The power of a corporation rests in its members or individual stockholders—except as restricted or limited by law. Unless the charter or state laws alter the case the majority rules, that is a shareholder has as many votes as he owns shares in the corporation. The right to vote in a stockholder's meeting is determined by the stock record as the ownership appears on the date of the meeting. A stockholder has the right to vote even if no certificate has been issued to him. He may vote in person or by proxy. An executor or trustee may vote the stock of his testator.

**16. Meetings.**—The statutes usually prescribe the manner in which meetings are to be called. In accordance with these statutes, the constitution or by-laws fix the time and place of meetings. Should the proper officer fail to call a meeting at the required time, the meeting may be lawfully held later, and if he refuse to issue the proper notice, he may be compelled to do so by mandamus proceedings. **Regular Meetings** are held in the manner set forth by the charter or by-laws, and the object need not be stated in the call. On the other hand, special meetings may be called at any time on proper authority, but the notice must state the object of the meeting and no other business may be there transacted. Any authorized meeting may be adjourned from time to time or from day to day, and the adjournments must be considered as the same meeting. Even if a meeting is illegally called it becomes a valid meeting by ratification of the proper official or by the shareholders. Notice of meeting is sent to whoever has the right to vote the stock, regardless of the rights of any pledger or pledgee.

**17. Directors.**—Active management of a corporation is vested in certain trustees or directors. Trustees are used

in many savings Banks having the power to fill vacancies among their number. Most corporations delegate managerial powers to directors who are either elected by a majority vote of the shareholders, or by a cumulative system of voting when such system is used. The directors must be shareholders. Their powers are established by charter or statute, custom or by-laws. As a rule they have general supervision over the business of the corporation. Their authority may be delegated to committees, corporate officials, or to individuals. Thus the President, the Secretary, the Treasurer, and other officers and committees of the corporation are chosen by the Board of Directors to act in the capacity of agents, in administering its affairs. A director may not act for the corporation individually, but his unauthorized acts would bind the corporation if subsequently ratified. He cannot be expelled from the board unless fraud can be proved. A director may not act both for the corporation and for himself. Unless otherwise provided directors are not entitled to compensation for their services; but where a director is employed to perform duties which do not pertain to his office as a director, he is entitled to a fair compensation.

18. **The Director's Liability.**—The directors of a company are liable to the company and to shareholders and outsiders for negligence, fraud, or for acts committed in excess of their authority. These are questions of fact to be determined by the courts. The directors of a corporation are personally liable for its debts if it can be proved that they incurred the obligations knowing that the corporation was insolvent. They have been held personally, jointly and severally liable as partners for debts of the corporation contracted in the State in which the company was found to have been doing business without having taken out a license.

19. **The Officers** of a corporation are usually the President, Vice President, Secretary, and Treasurer chosen by and from the Board of Directors. The ordinary rules of agency govern their powers and duties.

**The President** is the chief executive officer and chairman of the Board of Directors.

**The Vice President** takes over the duties of the President when for any reason the latter is unable to perform them. Quite frequently there are numerous vice presidents assigned to different duties.

**The Secretary** is the keeper of the records and the chief clerk of the corporation. He usually has the custody of the corporate seal.

**The Treasurer** has charge of the corporation's finances. He is usually under bond for the faithful performance of his duties.

**20. Dividends.**—A dividend is a payment to the shareholders out of the net profits of the corporation. It may be in actual cash, in property or in additional stock. When stock is selling on the exchange above par, corporations sometimes grant shareholders the right to purchase additional stock at par instead of declaring a cash or stock dividend. The law will not permit the payment of dividends out of capital or from borrowed money, and the directors would be liable for such a fraudulent payment. Furthermore, illegally paid dividends may be recovered for the benefit of creditors. The net profit of a corporation is an asset, and not secure against creditors unless or until the money has been declared as a dividend. When the dividend has been legally declared payable, no action can be brought by creditors. The directors must act in good faith, but they cannot be compelled to pay dividends. The courts hold that dividends must be general on all the stock so that each shareholder will receive his just share, and that the dividend shall be paid to the owner as determined by the books of the company. According to income tax rulings, a dividend in cash is considered as income, one in stock as capital.

**21. Liabilities of a Corporation.**—Through its agents or servants a corporation can be guilty of slander, libel, false representation, trespass, negligence, etc., exactly like an individual, and can be sued accordingly.

**22. The Shareholders Rights.**—A shareholder has the right to inspect the company's books at the proper time and for any reasonable purpose. Furthermore, he may employ an expert accountant to go thru the records if he has any reason to believe that the affairs of the company are not being handled properly.

**23. Trusts.**—A trust is a consolidation, pool or combine of two or more competing concerns, which establishes a limited monopoly in any industry or group of industries. The name originated from the fact that details and arrangements of the combination were in the hands of **trustees.** Large trusts today, such as the Standard Oil Company, the United

States Steel Company, etc., have adopted the method of incorporating a company either to purchase the property and business of all the firms to be united, or to purchase and hold the stock of all the subsidiary companies, thus controlling the business of them all. This plan has to a large extent nullified the effectiveness of the Federal Anti Trust Law. A company organized for the single purpose of holding the stocks of other corporations and thus controlling them is called a **holding corporation.**

24. **Domestic vs. Interstate Business.**—What constitutes doing business within a state is a delicate legal point. A Wisconsin corporation was refused the right to collect a large debt owed to it by a Michigan customer, simply because before selling the merchandise, the company had failed to qualify itself to do business in Michigan. Certain states require outside corporations to qualify and pay a license fee before they can transact domestic business within their borders. Similar rulings and an ever increasing code of laws make it necessary for all corporations to walk carefully, and consult expert legal advice before planning "turn-over sales," and other schemes which can be classed as domestic business.

## Corporation Forms

### Articles of Incorporation

Know all men by these presents. That we,....., ....., ....., ....., ....., ....., do associate ourselves together for the purpose of forming and becoming a corporation in the state of ..... for the transaction of the business hereinafter described.

1. The name of the corporation shall be (give name). The principal place of transacting its business shall be in the city of ....., county of ....., and state of .....

2. The nature of the business to be transacted by said corporation shall be the (state nature of business) and the erection and maintenance of such buildings and structures as may be deemed necessary, and to purchase real estate as a site therefor, and especially to.....

3. The authorized capital stock of said corporation shall be (state amount) thousand dollars in shares of $..... each, to be subscribed and paid as requested by the board of directors.

4. The existence of this corporation shall commence on the first day of ....., A. D., 19...., and continue during the period of .....years.

5. The business of said corporation shall be conducted by a board of directors not to exceed five in number, to be elected by the stockholders; such election to take place at such time and be conducted in such manner as shall be prescribed by the by-laws of said corporation.

6. The officers of said corporation shall be a president, secretary and treasurer, who shall be chosen by the board of directors, and shall hold

their office for the period of one year, and until their successors shall be elected and qualified.

7. The highest amount of indebtedness to which said corporation shall at any time subject itself shall be not more than..... thousand dollars.

8. The manner of holding the meetings of stockholders for the election of officers, and the method of conducting the business of the corporation, shall be as provided by the by-laws, adopted by the board of directors.

In witness whereof, the undersigned have hereunto set their hand this ..... day of ....., A. D., 19....

.....
.....
.....

State of .....
.....County

On this.....day of ....., 19...., before me,.....
....., a justice of the peace, in and for the said county, personally appeared the above named.....,
who are personally known to me to be the identical persons whose names are affixed to the above articles, as parties thereto, and they severally acknowledged the instrument to be their voluntary act and deed.

Witness my hand the date aforesaid.

.....
Justice of the Peace.

### Agreement With Promoters.

This agreement by and between..... and ....., parties of the first part, and ....., party of the second part, Witnesseth:

Whereas, the said parties of the first part have arranged and agreed among themselves to organize a corporation to be known as....., with a capital stock of ..... dollars divided into..... shares of the par value of ..... dollars each, the main office to be located at the city of ....., for the purpose of (here set out) and,

Whereas, the said parties of the first part have agreed among themselves to take and pay for ..... shares of the said capital stock on the complete organization of said company; and,

Whereas, the said party of the second part having had experience as a promoter, has signified a willingness to secure subscriptions for..... additional shares of the capital stock of said company:

Now, therefore, it is hereby agreed that the said party of the second part shall within.....days from the date hereof secure bona fide solvent subscriptions to the capital stock of said proposed corporation, the same to be paid on such terms as the board of directors of said corporation after its incorporation may determine, consistent with the governing statute of the state.

In consideration of the services so to be rendered by the said party of the second part, the said parties of the first part hereby undertake that the said company on complete organization by its proper officers shall issue to said party of the second part..... shares of the capital stock of said corporation as full paid, and for which the said party of the second part shall pay no other consideration whatever. On failure or refusal of the said corporation to so issue said shares of stock to said second party, the said parties of the first part hereby agree and bind themselves to pay the said second party the sum of..... dollars in cash.

On failure of said second party to secure said solvent and bona fide subscriptions within said time this agreement shall be of no force and effect. In case said second party shall procure said subscriptions in said time, then the said parties of the first part agree to sign any proper

papers, instruments, articles or certificates necessary to complete the incorporation of said proposed company, and to pay the necessary fees, expenses and charges for the incorporation thereof.

In witness whereof, the parties have hereunto set their hands this .....day of....., 19....

(Signed.)

**Subscription to Stock Before Incorporation. Short Form**

The undersigned, in consideration of the mutual promises of the subscribers hereto, as hereinafter set forth, do severally agree to take the number of shares of the capital stock of the .....company, set opposite their respective names, as soon as said company shall be incorporated, and to pay for said shares at their par value upon demand of the treasurer of said company after its incorporation.

| Name | Residence | Number of Shares |
|---|---|---|
| ..... | | |
| ..... | | |
| ..... | | |
| ..... | | |

**Agreement to Sell Shares of Stock.**

Memorandum of agreement, made this..... day of....., 19...., between.....of the city of..... of the first part, and ....., of the same place, of the second part, Witnesseth: That the said.....agrees to sell and convey to the said ....., on or before the 1st day of..... next,.....shares of the capital stock of.....for the price or sum.....per share, and to make, execute, and deliver to the said .....all assignments, transfers, and conveyances necessary to assure the same to him, his heirs and assigns.

In consideration whereof, the said.....agrees to pay unto the said.....the price of sum of.....for each and every share of the said stock so assigned, whenever, and as soon as the said assignment and the scrip of stock so assigned shall be properly executed and delivered to the said.....

In witness whereof, the said parties have hereunto set their hands and seals, the day and year first above written.

.....

.....

**Notice of Cancellation of Subscription.**

To the .....Company:

As my subscription to the capital stock of your company has not been accepted, you are hereby notified that I propose to and do now hereby withdraw and cancel my said proposed subscription, and shall not hereafter be bound by the same.

You will, therefore, govern yourself accordingly.

(Signed.)

**Statement of Intention to Form Corporation for Pecuniary Profit, to be Filed as Preliminary Step Toward Obtaining License.**

State of .....,

.....County.

To ....., secretary of state:

We, the undersigned (here recite names), propose to form a corporation under an act of the general assembly of the state of....., entitled, "An act concerning corporations," approved April 18, 1872, and all acts amendatory thereof; and, for the purpose of such organization we hereby state as follows, to wit:

1. The name of such corporation is ..... 2. The object for which it is formed is ..... 3. The capital stock shall be ..... 4. The amount of each share is ..... 5. The number of shares ..... 6. The location of the principal office is in....., in the county of ....., state of ..... ..... 7. The duration of the corporation shall be ..... years.

.....
.....
.....

(Add acknowledgment.)

**General Proxy**

Know all men by these presents, that I,....., the undersigned, do hereby constitute and appoint.....my attorney and agent (with power of substitution for me and in my name, place and stead) to vote as my proxy for the election of directors and upon all matters that may be considered at the annual meeting of the stockholders of the .....company, to be held at its office at the city of ....., of county of ..... state of ....., on the ..... day of ....., 19...., at ..... o'clock .....M., or any adjournment thereof, according to the number of votes I should be entitled to vote if I were personally present at said meeting, hereby revoking all former proxies by me made and given.

In witness whereof, I have hereunto set my hand and seal this..... day of ....., 19....

Witness:

.....

(Signature.)

**Revocation of Proxy.**

Know all men by these presents, that I, the undersigned, do hereby revoke and annul a certain proxy by me given to ..... (or, any and all proxies or powers of attorney heretofore given by me) authorizing and empowering the said ..... to represent me and to vote in my name and stead and to act for me in any way whatsoever at any meeting or meetings of the stockholders of the ..... company.

In witness whereof, I have hereunto set my hand and seal this..... day of .....

(Witnessed.)

(Signed.)

## CRIMINAL LAW AND PROCEDURE

1. **Definition.**—A crime is an act in violation of some existing prohibitory statute and the common morality of the country. It is a wrong committed against the State. An individual, therefore, cannot compromise a criminal wrong, for crime is a matter for the State to settle.

2. **Burden of Proof.**—The burden of proof is upon the State. In other words a person accused of a crime is presumed innocent until the contrary is proved to the satisfaction of the jury. The verdict must be unanimous to convict. If any doubt remains in the minds of the jury, after hearing

all the evidence, it is their duty to acquit, and once acquitted, a prisoner cannot be brought to trial a second time for the same offense.

THE BAR OF JUSTICE.

3. **Defenses.**—The law takes into consideration two defenses, that of insanity, and self defense. A person who cannot distinguish right and wrong is insane and not held responsible for his acts, but the insanity must be proved. Again, a person may defend his person, family, or property and may use such force as is necessary. Intoxication, momentary insanity, and ignorance of the law are not looked upon with favor by the courts as defenses for crime.

4. **Confession.**—A legal confession must be voluntary and free from all compulsion, either physical or mental. Third degree methods are unlawful and a confession procured by the use of threats or violence has no standing in court.

5. **Trial By Jury.**—A person accused of a crime is guaranteed the right to a fair and impartial trial by a jury of twelve men, and to be represented by a competent lawyer. The trial must occur in the county where the crime was committed unless a "change of venue" is granted in cases where it can be proved that on account of prejudice the accused could not there receive a fair trial.

6. **Habeas Corpus.**—A writ of habeas corpus is issued by the court to prevent people from being unlawfully deprived of their liberty. The prisoner is released unless cause can be shown for his detention. This is a fundamental right of the Constitution.

7. **Criminal Procedure.**—The first step in criminal procedure is the issuing of a warrant by a Justice of the Peace or judicial officer. When arrested the accused is either placed in custody or if he can furnish a satisfactory bond he is released on bail awaiting trial. If the offense is a misdemeanor the case is tried and settled before the Justice, if it is a felony, the Justice holds a preliminary trial, certifying the findings to the Grand Jury. Acting in an investigating capacity the Grand Jury may indict the accused and the case is tried on its merits in the regular criminal court, or it may be dropped on account of insufficient evidence.

### Criminal Law in Brief

8. **Adultery.**—It is a crime for any unmarried man and woman to openly live together as man and wife.

9. **Accessory to the Crime.**—Any person acting or assisting another to commit or abett a crime or to escape from the scene of the crime is equally guilty with the principal.

10. **Assault and Battery.**—A person who threatens or attempts to strike another person is guilty of assault, even though not followed by actual battery. A successful assault becomes a battery when the injury is actually done. The slightest unlawful touching may be a battery.

11. **Bribery** consists in the offering or giving of money or other valuable consideration to a public officer or one performing a public duty, as an inducement for him to commit an unlawful act. The giver and the receiver of the bribe are equally guilty.

12. **Blasphemy.**—The use of blasphemous language, defaming or defiling God or religion is a misdemeanor.

13. **Bigamy.**—A person having more than one husband or wife is guilty of a crime.

14. **Burglary** consists in the unlawful breaking or entering into the building of another with the intent to commit a crime.

15. **Bail** means the sureties who bind themselves to have the accused present in court when required for trial.

16. **Contempt of Court.**—Any attempt to obstruct justice or to injure the dignity of the court is punishable by the action of the court, and is not subject to appeal.

17. **Conspiracy.**—When two or more persons get together and agree to do an unlawful act, the agreement is called a conspiracy.

18. **Embezzlement** is the wrongful appropriation and use of a person's property which has voluntarily been turned over to another person for some lawful use.

19. **Extortion** is the asking and accepting of unlawful fees by a public officer.

20. **False Pretense.**—It is a criminal offense to obtain money or other thing of value by the false or fraudulent representation of a past or existing fact.

21. **Fighting.**—Affray or fighting is defined as the act of two or more persons fighting in a public place.

22. **Fornication.**—When an unmarried person has illicit intercourse with a married person, he is guilty of fornication.

23. **Forgery** is the false making or the material alteration of a written instrument, contract or legal paper.

24. **Homocide** is the unlawful taking of a human life. There are four degrees of homocide. First and second degree murder, and voluntary and involuntary manslaughter.

Voluntary

Involuntary

TWO KINDS OF EMPLOYMENT.

25. **Infanticide** is the murder of an infant born alive. A person causing or assisting in the miscarriage of a pregnant woman is guilty of abortion. The killing of an unborn infant is murder.

26. **Larceny** is the unlawful appropriation and use of a person's property. It differs from embezzlement in that the original taking is unlawful. Petit larceny is a misdemeanor, grand larceny a felony.

27. **Manslaughter** is the unlawful killing of a human being without malice or premeditation.

28. **Mayhem** is the act of maiming, disfiguring, or cutting away any part of the human body.

29. **Murder** is the unlawful taking of a human life with malice and premeditation.

30. **Malicious Mischief** is a crime which consists of the wilful and intentional injury of another's property.

31. **Offenses on the high seas** are tried by the country under whose flag the ship is sailing.

32. **Perjury** is the false swearing of a witness under oath. A person inducing a witness to perjure himself is equally guilty.

33. **Profanity.**—The use of profane or insulting language in the presence of women or in public is a misdemeanor.

34. **Prohibition Laws.**—It is a crime and a violation of the constitution of the United States to manufacture, sell, have for sale, or be in possession of liquor containing more than one-half of one per cent of alcohol. It is also unlawful to have in your possession any part of a still or distilling apparatus.

35. **Rape.**—It is a felony to have sexual knowledge of a girl or woman without her consent. Some states exact the death penalty.

36. **Riots.**—A riot is an unlawful assembly of persons bent on carrying out certain unlawful ends.

37. **Robbery** is larceny or stealing property from another by force and intimidation. It is a felony punishable by death in some states.

38. **Seduction.**—To have intercourse with a girl through false promises of marriage is a crime.

39. **Stolen Property.**—It is larceny to buy, receive, or conceal stolen property with the intent not to return it to the rightful owner. In buying property demand proof of the ownership.

40. **Treason.**—It is treason to make war against, or to assist the enemies of, the existing government. It is punishable by death. A foreigner, owing no allegiance to the government cannot be guilty of treason.

41. **Unlawful Assembly.**—It is a criminal offense for two or more persons to assemble in contemplation of some unlawful act.

## DEEDS

1. **Definitions.**—A deed is a written agreement under seal for conveying real estate. There are three kinds of deeds: warranty deeds, indentures, and quit claim deeds. Any person of legal age, competent to transact business and owning real estate, may convey it by deed. The seller is called the **grantor**, the buyer the **grantee**.

2. **A Warranty Deed** is one in which the seller or grantor, as he is called, warrants the title to be good, and agrees to defend the same against all parties. Such a deed usually provides, a, that the seller has a right to convey the real estate; b, that he is the owner of the land mentioned in the deed; c, that the land is free and clear from all former and other grants, bargains, sales, liens, taxes, assessments and encumbrances of any kind; d, and that the purchaser will have the quiet enjoyment of the real estate. If it afterwards develops that the grantor did not have the right to sell or if the grantee discovers an encumbrance on the land, or if he has any trouble about the title, the purchaser has a good action against the seller.

3. **An Indenture** is another form of deed used in selling land. It is signed by all the parties and contains the same warranties as are found in a warranty deed. The word indenture comes down to us from old English Law. In those days a deed was drawn up and signed by all the parties, and was then torn in half, one part going to the grantor, the other to the grantee. In order to establish title to the land the two parts or indentures had to match. As a matter of fact almost all deeds today start out with this form: THIS INDENTURE WITNESSETH.

4. **A Quit Claim Deed** releases only what interest the grantor may have in the property. This form of deed is

given by the holder of a mortgage when it is paid or discharged, or by one whose title to the real estate is defective. In the latter case the seller conveys only whatever interest he may have. A quit claim deed contains no warrants.

SIGNING THE DEED

5. **General Principles.—**

   a. Deeds must be written or printed on paper or parchment.

   b. The names of the parties and places of residence are written first.

   c. The property must be fully described. The description should be by bounds, or by divisions of United States surveys, or by subdivisions into blocks and lots, as shown on the records.

   d. The deed must express a consideration, also a covenant to "warrant and defend," and be signed and sealed by the grantor or grantors. A deed without consideration is void.

e. Numbers should always be written in words followed by figures in parentheses thus, Two Hundred Dollars ($200.00.)

f. If the grantor is married both he and his wife should join in the grant and in the execution of the deed, signing and acknowledging.

g. The acknowledgment of a deed can be made only before certain persons authorized to take the same, such as justices of the peace, notaries, masters in chancery, judges and clerks of the courts, commissioners of deeds, etc.

h. The deed takes effect upon its delivery to the person authorized to receive it, and should be recorded at once.

i. After the acknowledgment of a deed the parties have no right to make the slightest alteration.

j. Never purchase real estate without a careful examination of the title, either by yourself or a trusted attorney.

k. Always procure an abstract of title before advancing money or signing contract for purchase of land or lots.

l. A deed in which a mistake has been made can be corrected in all cases of fraud or accident.

m. In investigating the title to real estate, the attorney is bound to make a careful examination of the records and to report the facts, and is liable for any injury resulting from his negligence.

n. The deed of a corporation must be signed by an agent or attorney and should be carefully executed.

o. The execution of a deed is generally attested by witnesses.

p. To have full effect a deed should be acknowledged and recorded.

q. It is considered recorded as soon as it reaches the recording officer, who generally notes upon it the day, hour, and minute when it was received.

r. If the land is a gift and no price is paid for it, it is customary to insert "in consideration of one dollar paid me, the receipt of which I acknowledge." (See "Agreement to Purchase Land.")

## Forms For Deeds

### Warranty Deed

Know all men by these presents, that we ..... and ....., husband and wife, in consideration of the sum of $..... in hand paid, do hereby grant, bargain, sell and convey to ....., of ..... county, ....., the following described real estate situated in the county of ....., and state of.....towit: (describe premises), to have and to hold to his heirs and assigns forever. Together with all the tenements, hereditaments, and appurtenances thereto belonging. And we hereby covenant with said .....that we are lawfully seized of said premises; that they are free from incumbrances; that we have good right and lawful authority to sell the same, and we covenant to warrant and defend the same against the lawful claims of all persons whomsoever. And the said....., hereby relinquishes her right of dower in said premises.

In witness whereof we have hereunto set our hands this..... day of ....., 19....
In presence of
.....
State of .....
.....County.

.....
.....

On this .....day of ....., 19...., before me, a justice of the peace in and for said county, personally came the above named ....., who are known to me to be the identical persons whose names are affixed to the above deed as grantors, and severally acknowledge the instrument to be their voluntary act, and deed.

In witness whereof I have hereunto set my hand the day and year above written.

.....
Justice of the Peace.

### Deed of Indenture—Short Form.

This indenture, made the .....day of ....., 19...., between ..... (insert occupation and residence), of the first part, and ..... (insert occupation and residence), of the second part,

Witnesseth: That the said part.....of the first part, in consideration of .....dollars, lawful money of the United States, paid by the part .....of the second part, do.....hereby grant and release unto the said part..... of the second part,..... h..... heirs and assigns forever (description of land). Together with the appurtenances and all the estate and rights of the part..... of the first part in and to said premises.

To have and to hold the above-granted premises unto the said part .....of the second part,..... h.... heirs and assigns forever.

And that said part .....of the first part do ..... covenant with said part .....of the second part, as follows:

That the part.....of the first part will forever warrant the title to said premises.

In witness whereof, the said part .....of the first part ha.... hereunto set h..... hand and seal....., the day and year first above written.

(Signature.)

In the presence of
(Acknowledgment clause.)

**Form of Quitclaim Deed.**

The grantors (here insert grantors' name or names and places of residence), of the city of ....., for the consideration of (here insert consideration), convey and quitclaim to (here insert grantee's name or names) all interest in the following described real estate (here insert description), situated in the county of .....in the state of .....

Dated this .....day of ....., A. D., 19....

.....L. S.

## DOWER

**1. Definitions.—Dower** is the provision which the law provides for the support of a widow out of her deceased husband's estate. Unless modified by statute this interest consists of the use of one-third of her husband's land after his death. During the husband's life, the law protects the wife's interest by prohibiting the sale of real estate unless she joins with him in signing the deed. The interest which a husband acquires in the land belonging to his wife after her death is called **curtesy.**

**2. General Principles.**—a. The dower right is regulated by widely differing statutes in the several states. b. If the land is subject to a mortgage or a lien of any kind, the wife cannot get possession until the encumbrance has been removed. c. A woman may revoke her dower right by signing with her husband a deed for the conveyance of the real estate. d. A husband can will his wife a certain amount in place of her dower, but the wife can claim the dower if she prefers it. e. The widow is usually entitled to administer. f. Dower does not exist in crops or trees, but does exist in mines and quarries. g. The widow of a partner is entitled to her dower in partnership land after the payment of all debts and a settlement made between the partners. h. A legal marriage is necessary to sustain a dower estate. An absolute divorce or legal separation divests the wife of her dower. i. Dower may be barred by a marriage settlement or agreement made before marriage. j. Dower is assigned to the widow either by direction of the court or by agreement.

## DRUNKENNESS

1. Both the civil and the criminal courts are frequently compelled to rule on cases in which one of the parties was intoxicated. This in spite of the Volstead Act.

2. **In Civil Law** the courts have recognized cases in which intoxication was an excuse for repudiating a contract. The mental condition must be taken into consideration especially where a man has become utterly incompetent or insane as a result of his intemperate habits. As we have seen before, such a man cannot make a contract. If one is visibly intoxicated the contract could be declared void on the ground that the other party must have realized his condition. The element of fraud enters still more strongly if one party deliberately induced the condition of the other. However, if the intoxicated party ratifies the agreement when sober or fails to repudiate it, he would be legally bound by it.

3. **In Criminal Cases** the courts hold that one who voluntarily becomes intoxicated, cannot claim his intoxication as an excuse for his criminal acts. Yet in all such cases the facts must show that there was deliberate intent to commit the crime before there can be any conviction. This aspect has been brought up in many cases where the defendant was so drunk that he entered the wrong house, or carried off the property of others, or slandered the reputation of another.

4. **General Principles.**—(a) It is the duty of those who come in contact with an intoxicated person to take his condition into consideration. (b) A sober party must exercise a reasonable degree of care to avoid injury to a drunken individual. (c) A railroad company is likewise bound to take into account the helpless condition of its passenger, and to exercise reasonable care in keeping him out of danger. (d) Drunkenness is not a legal excuse, but sometimes it is evidence of the absence of malice.

## EMPLOYER AND EMPLOYEE

**1. Explanation.**—The term **employee** refers to a person who is hired by a **contract of service** to perform certain duties under the direction of another person called the **employer.**

**2. Kinds of Contracts.** — There are two general employment contracts. 1st.—Contracts to do some particular thing such as to buy and sell stocks or provisions, to perform a surgical operation, or collect accounts. 2nd. — Contracts to do whatever the employer may direct. Farm hands domestic servants, and clerks belong to this class.

A LOAFER'S HEIRS NEVER HAVE TO CONTEST A WILL.

**3. Compensation.** —If no agreement has been made before, the employee can claim the price usually paid for such service. If the employee leaves because of insufficient food, ill-treatment or disabling sickness, he is entitled to pay for the time he worked.

**4. Duties of Employee.**—The employee should faithfully perform the services for which he contracted for the entire term or period of service. If he leaves before expiration of time, he can claim no pay for the work done. This is a general rule of law, but some able judges have decided that even in this case the employee is entitled to pay for work

done less what the employer lost by necessity of paying higher wages, or what he lost by the employee's failing to perform his contract. The employee is bound to take reasonable care of the property in his care, and is liable for any loss or injury to it when due to his negligence.

5. **Discharge.**—An employee may be discharged at the end of his contract without any cause or previous notice. If he is discharged without good cause and before the termination of his agreement, he is entitled to pay for the whole period provided that he has first made an earnest attempt to secure other employment in the same kind of work. If he gets work at lower wages he is entitled to the difference. If his pay is equal or higher than the former rate, he can not collect. If, however, the discharge is on account of incapacity, dishonesty, or misconduct, he is not entitled to any pay for the unexpired period. Frequently a person is hired for a month or for a year, at the termination of which the work continues. The law presumes a new contract on the same terms.

6. **Law of Kindness.**—A kind and pleasant treatment on the part of the employer, even an expression of appreciation of work well done, goes far, very far, in making the employee worthy and competent. Harsh means and manners have often discouraged those who would by kind treatment have become efficient and competent in their work. In all cases of disagreement a friendly settlement is far better in every way than a resort to the law.

7. **Liability of Employer.**—An employer's liability is of two kinds: 1st, liability for the acts of his employees, and 2nd, liability for the injury or death of his employees.

8. **Liability For Acts of Employees.**—The employer is liable for the wrongful acts of his employee producing injury to others, provided the acts are done in the course of the ordinary employment. Thus a railroad company is liable to passengers for negligence of conductors and engineers while running trains on the road.

9. **Workmen's Compensation.**—In most of the states the liability of the employer for the safety of his workmen is determined by the general law of negligence. In other words, if a workman's negligence contributed to his injury, the employer is not liable unless it can be shown that the accident was partly his fault or the fault of a fellow servant.

**10. Who is Entitled to Compensation.**—Any person employed by a contract of service who is under the control of the employer while at work at the machine or other thing from which the injury arose is entitled to compensation. Previous physical condition is not considered in determining the amount.

**11. Who is Excluded.**—The workmen's compensation acts differ in the several states. The Federal act protects persons employed by the United States and workmen engaged in Inter-State Commerce. While it is difficult to state a general rule, the following are excluded from the benefits in most states, in others the compensation is optional:

a. Minors and apprentices.
b. Farm laborers.
c. Domestic servants.
d. Casual employees.
e. Independent contractors.
f. Public officers.

**12. Dependents.**—The law also provides that the compensation be paid to dependents in case of death. Payments may be made to actual dependents or to partial dependents in accordance with the degree of dependency, but they cannot be made to those who do not belong in classes of relatives defined in the statutes. These include widows, children, step-children, illegitimate children, adopted children or a dependent parent.

**13. Payments.**—The compensation acts provide for payments to the injured or his dependents in case of partial incapacity, permanent incapacity, or death, in amounts depending on the earning power of the injured at the time of the accident. Maximum and minimum amounts are usually specified.

**14. Insurance.**—The compensation laws are rigidly enforced, and to protect themselves, employers quite generally take out liability insurance on the life and health of each employee. Then when an accident occurs, the Insurance Company assumes all liability and relieves the employer of any claims which might be made under the workmen's compensation law. This method of limiting liability is provided for in the laws of all the states.

The cost of such insurance is based on the size of the payroll and the nature of the employment. It ranges from a purely nominal figure for office work to a rather high rate for the more hazardous occupations.

15. **Variations.**—It would be impossible in a work like THE BUSINESS GUIDE to attempt an explanation of the Workmen's Compensation laws in the different states. For example, the law in California fills twenty-one pages larger than those in this book, is in fine print, and is very technical. A digest of the Illinois law covers fifty-six large pages. In some states deductions are made for contributory negligence, and in others awards are fixed for specific injuries, and in about every state there can be found numerous variations. In fact, there are so many differences and circumstances which act to modify the prescribed payments that no one table or group of tables could tell the story at a glance.

16. **Sources of Information.**—Copies of the compensation and liability statutes may always be secured free of charge by writing to the Secretary of State for the State in question. He should be addressed at the State Capitol. Owing to the technical nature of the subject, however, it is always a good plan to ask your insurance adviser to explain your duties and obligations under the law. He is in a position to know the facts and to provide the protection you need.

## EQUITABLE REMEDIES

1. **Definitions.**—A remedy is the legal means employed to enforce a right or redress an injury. Suppose A has purchased a horse from B who refused to deliver the animal. In a court of equity A could compel B to deliver the horse and this would be an **equitable remedy.** In a court of law A could recover damages for the loss he had sustained through B's refusal to deliver the horse, and this would be a **legal remedy.** Some states have courts of law only; others have both courts of law and courts of equity. In either case the form of complaint and the prayer for relief are the same.

2. **The Common Remedy.**—Relief in equity is often sought to compel a person to execute a contract which he has made. It quite frequently happens that a seller regrets his action after the contract has been made. The court of equity will compel him to deliver the property provided that the law has no adequate remedy. When an article has a peculiar sentimental value, when it is of rare value like an heirloom, or when it is an article which cannot be easily purchased in the open market, the one party can compel the other to fulfill his contract. Ordinarily, the buyer of articles like cattle, lumber, dry goods, hardware, etc., has only a law remedy to recover damages.

3. **Equity Will Enforce Agreements:—**

   a. When legal remedies (or damages) would be inadequate.

   b. When a contract has been made to give a mortgage to secure a loan of money.

   c. When the seller of a business agrees not to enter into competition with the buyer.

   d. When an employee agrees not to disclose the trade secrets of his employer.

   e. When a tenant threatens or attempts to injure the real estate of the landlord.

   f. When an agreement has been made by the purchaser of land that he will not do or attempt to do certain things that might injure the property or the surrounding property.

   g. When an established patent has been infringed.

4. **Equity Will Not Enforce Agreements:—**
   a. When the law has an adequate remedy.
   b. When the goods contracted for can be readily purchased in the open market.
   c. When there is a contract to render personal service.
   d. When the contract in question is one where one party agrees to lend money to the other.
   e. When there is a contract to form a partnership.
   f. When such agreement would be in restraint of trade, would create a monopoly, or would be illegal for any other reason.

5. **Injunctions.**—Relief in equity is often brought about by the means of an injunction. An injuction is a restraining order issued by a court in equity on petition of the injured party. If the need is great the court will immediately issue a temporary injunction which orders the injuring party to do or not to do certain things, and fixes the time for a hearing. At this hearing, which is fixed within a reasonable time, and which is conducted like any ordinary trial, the court decides whether the injunction will be dissolved or whether it will be made permanent. Injunctions have quite recently sprung into prominence thru their use against labor unions during strikes. Injunctions have been issued and upheld enjoining the members of labor union from picketing, or otherwise preventing other workers from taking their places.

6. **Smothering a Strike By Injunction.**—During the Railroad strike of 1922, Judge James H. Wilkerson of the Federal District Court in Chicago, was responsible for the most sweeping injunction ever issued in such cases. It provided:—

   a. That the striking unions and certain of their officials must refrain from combining to interfere with railroad transportation, or to interfere with any persons employed by the roads or desirous of such employment.
   b. That the unions must not aid any one by letters, telegrams, telephones, word of mouth or otherwise to do any of the forbidden acts.
   c. That the unions must keep off railroad property; they must not try to induce by threats, violence,

abusive language, intimidation, display of numbers or force, jeers, entreaties, arguments, persuasion, rewards or otherwise, anybody to stop work in railroad shops.

d. That the workers could do no picketing.
e. That the union officials were restrained from issuing any strike directions, or from saying anything which might keep any strike breaker from work.
f. That they were not to use any union funds to do any of the things forbidden in the injunction writ.
g. And finally, that they should not in any manner, by letters, printed or other circulars, telegrams, telephones, word of mouth, oral persuasion, or suggestion, or through newspaper interviews, or otherwise encourage, direct or command any person, whether member of the union or not, to abandon the employment of the railroad companies, or refrain from entering the service of the railroad companies.

## EXEMPTIONS

**1. Definitions.**—A homestead is the abode or dwelling house of a family land owner and includes a specific amount of the adjacent land varying in the different states. Exemption laws are defined as laws for the purpose of protecting those who are unable to pay their debts without causing distress to themselves and their families.

**2. General Principles.**—(a) Property covered by mortgage cannot be held. (b) A person can usually waive his exemption rights in a promissory note or other written contract. (c) A legal homestead is generally in one piece but it may be divided by a road and in some states may consist of several distinct pieces. (d) A homestead is exempt from all debts except taxes, although in some states it is not exempt from pre-existing liens, fines for public offenses, and similar debts. (e) A person who is the head of a family within the legal meaning of the term is entitled to the homestead exemption. This right survives to the husband or the wife in case of death, or to the surviving children un-

## Exemption Laws.

| STATES | Value of Personal Property | | Value of Homestead | Explanations |
|---|---|---|---|---|
| | Married | Single | Married | |
| Alabama | $1000 | $1000 | $2000 | Or 160 acres of land, wages $25.00 per month |
| Alaska (a) | .... | 175 | .... | 160 acres, value not to exceed $2,500 |
| Arizona (a) | 500 | .... | 4000 | Earnings for 30 days prior to levy |
| Arkansas | 500 | 200 | 2500 | 160 acres of land |
| California (c) | 1000 | .... | 5000 | Must be designated as such in writing and recorded |
| Colorado (a) | 300 | .... | 2000 | Word "Homestead" must be written on record of deed |
| Connecticut (c) | .... | .... | 1000 | Claim must be recorded |
| Delaware (b) | 200 | .... | none | ..... |
| Dist. of Columbia (c) | 300 | .... | none | ..... |
| Florida | 1000 | .... | .... | 160 acres of land in country, ½ acre in city |
| Georgia | 1600* | .... | .... | ..... |
| Idaho (c) | .... | .... | 5000 | Single, $1,000. (e) Homestead must be designated by a writing executed and recordedlike a deed |
| Illinois | 400 | 100 | 1000 | Wages $15.00 per week |
| Indiana | 600† | .... | .... | ..... |
| Iowa (c) | 200 | .... | .... | 40 acres in country, ½ acre in city. No limit as to value |
| Kansas (c) | 500 | 500 | .... | 160 acres in country, 1 acre in city |
| Kentucky (c) | .... | .... | 1000 | ..... |
| Louisiana (a) | .... | .... | 2000 | 160 acres of land. Written declaration must be recorded. |
| Maine (c) | .... | .... | 500 | Must be declared |
| Maryland (c) | 100 | 100 | none | ..... |
| Massachusetts (c) | .... | .... | 800 | ..... |
| Michigan (c) | .... | .... | 1500 | 40 acres in country, $1,500 in city |
| Minnesota (c) | 500 | .... | .... | 80 acres in country, ½ to 1 acre in city, varying with size of city |
| Mississippi (c) | 250 | .... | 2000 | 160 acres of land |
| Missouri (c) | .... | .... | .... | From $1,500 to $3,000, according to size of city. 160 acres of land |
| Montana (c) | .... | .... | 2500 | And not to exceed 160 acres of farm land or ½ acre in city |
| Nebraska (f) | 500 | .... | 2000 | ..... |
| Nevada (d) | 1000 | .... | 5000 | Written declaration must be recorded |
| New Hampshire (c) | .... | .... | 500 | Also $500 homestead for single man (e) |
| New Jersey | 200 | .... | 1000 | Must be advertised and recorded |
| New Mexico (c) | 500 | .... | 1000 | ..... |
| New York (a) | 250 | .... | 1000 | Wages $12.00 per week |
| North Carolina | 500 | .... | 1000 | ..... |

## Exemption Laws (continued)

| STATES | Value of Personal Property | | Value of Homestead | Explanations |
|---|---|---|---|---|
| | Married | Single | Married | |
| North Dakota (c) . . | $1500 | .... | $5000 | 160 acres in country, or 2 acres in city not exceeding $5,000 in value |
| Ohio (c)..... | 500 | .... | 1000 | . . . . . |
| Oklahoma (c)..... | .... | .... | 5000 | 160 acres in country, 1 acre in city |
| Oregon (c)..... | 400 | .... | 1500 | 160 acres in country, 1 block in city |
| Pennsylvania..... | ‡ 300 | .... | .... | . . . . . |
| Rhode Island (c)..... | 300 | .... | .... | . . . . . |
| South Carolina..... | 500 | .... | 1000 | . . . . . |
| South Dakota..... | 750 | 300 | 5000 | 160 acres in country, 1 acre in town |
| Tennessee (c)..... | .... | . . | 1000 | . . . . . |
| Texas (c)..... | .... | . . | .... | 200 acres in country, $5000 in city, all wages |
| Utah (c)..... | .... | . . | 2000 | $1,500 for debtor, $500 for wife, $250 all members of family |
| Vermont (c)..... | 200 | . . | 500 | . . . . . |
| Virginia (c)..... | 300 | . . | 2000 | . . . . . |
| Washington ..... | 500 | . . | 2000 | Must be declared |
| West Virginia (w)... | 200 | . . | 1000 | Must be recorded |
| Wisconsin (c)..... | 200 | . . | .... | 40 acres in country, ¼ acre in city, not exceeding $5,000 |
| Wyoming . . . . . | 500 | . . | 1500 | Over 60 years of age, $2,500 |

(a) Articles of specific property too numerous to mention, no value fixed. (b) Exemptions vary in different counties. (*) In either personalty, realty or both. † In personalty or realty. (c) Articles of specific property too numerous to mention, varying in amount in different trades and professions. (d) Articles of specific property, ranging in value from $100 to $500. (‡) Real or personal. (e) A single man can claim homestead only in Idaho and New Hampshire. (f) If no homestead is taken, $500 in personalty is exempt, and the exemption laws in New Mexico are the same as in Nebraska. (w) Homestead must be so designated and recorded before debt is contracted.

til they come of age. (f) In divorce cases the wife ceases to be a member of the family and thus loses her homestead right, unless reserved in the decree. (g) Desertion does not destroy the homestead right. (h) A homestead may be sold or mortgaged regardless of the claims of creditors. (i) Any person who is the head of a family, or who is 21 years old and is a citizen of the United States or has filed his declaration of intention of becoming such, and who is not the proprietor of more than 160 acres of land in any state or territory, is entitled to enter one-quarter section (160 acres) or less quantity of unappropriated public land under the homestead laws.

## GUARANTEES

1. A guarantee (also spelled guaranty) is a written promise that a person will perform some duty or answer for the payment of some debt, in case of the failure of another person.

2. The person who guarantees the faithfulness of another is called the guarantor.

3. The guarantee is the person to whom the pledge is made.

4. All guarantees must be in writing.

5. A guarantee, to be binding, must be for a consideration. The consideration should be named or expressed as "for value received."

6. A mere accommodation or overture is not sufficient to hold a guarantor.

7. A guarantee must be accepted to make it a contract, and the guarantor must have notice of its acceptance within a reasonable time.

8. A guarantor, after paying the debt, has the right to substitute himself in place of the creditor.

9. Guarantees of commission merchants binding them to warrant the solvency of the purchaser of goods they sell on credit, need not be in writing.

10. The terms of the contract of guarantee are to be strictly construed.

11. In the sale of a horse the purchaser can only hold the guarantor for defects of the horse when sold.

12. In case of a cough the horse must have been heard to cough previous to the purchase. If lame, the lameness must be proved to arise from a cause that could not have occurred after the purchase. A guarantee after the sale of the horse is of no effect.

### Forms of Guarantees

**A Guarantee For the Purchase of a Horse.**

Osage, Kansas, June 30, 19....

In consideration of One Hundred and Fifty Dollars, for a bay mare, I hereby guarantee her to be only six years old, sound, free from vice and quiet to ride or drive.

RALPH GOOD.

N. B.—This guarantee embraces every cause of unsoundness that can be detected, and the seller will be held for all the defects in the animal at the time of sale. This is the only safe and satisfactory way for a man to purchase a horse who is not an experienced judge of horses.

**Guarantee on Back of a Note.**

Fort Scott, Kansas, Oct. 12, 19....
For value received, I hereby guarantee the payment of the within note.
JAMES GLOVER.

**Guarantee For Payment of a Bill.**

Dayton, Ohio, Aug. 30, 19....

W. Reinke, Esq.
Dear Sir:—I hereby guarantee the payment of any bill or bills of merchandise Mr. John A. Dahlem may purchase from you, the amount of this guarantee not to exceed five hundred dollars ($500), and to expire at the end of three months from date.
Respectfully yours,
CHAS. ADAMS.

**Guarantee of a Debt Already Incurred.**

St. Louis, Mo., July 10, 19....

Messrs. H. E. Bechtel & Co., West Salem.
Gentlemen:
In consideration of one dollar paid me by yourselves the receipt of which I hereby acknowledge, I guarantee that the debt of four hundred dollars now owing to you by Ira J. Ferry shall be paid at maturity.
Very respectfully yours,
W. A. PIPER.

## HUSBAND AND WIFE

1. **Marriage** is a civil contract. While marriage licenses are now required by all the states, many restrictions have been thrown around the issuing of such licenses within recent years. Marriages between whites and negroes, between whites and Indians, between whites and Chinese, are respectively forbidden in various states. Unlike other contracts marriage cannot be terminated by the consent of both parties.

2. **Contract to Marry in the Future.**—Mutual promise by a man and a woman to marry at some future day constitutes a valid contract.

3. **A Marriage Contract.**—A marriage is a civil contract, and is entered into by the mere consent of the parties. If the man says to a woman, "Will you marry me?" or words to that effect, and she says "Yes," or words that imply an affirmative answer, it is by law an agreement or promise of marriage, and both parties are legally held to carry out in good faith the promise thus made.

4. **Breach of Promise.**—If either party refuses to carry out the contract, he or she is guilty of breach of promise,

and may recover damages of the other party. It is not very often, however, that the man sues the woman, though he has the right to do so if she fails to make good her promise.

5. **Necessary Proof.**—Generally in case of a lawsuit for breach of promise, there are no direct witnesses, as people generally become engaged without the presence of a third party, but the engagement may be implied by the conduct of the party sued.

6. **Implied Evidence.**—The promise of marriage is implied from circumstances, such as constant visits, presents, or open declaration of the parties, the reception of the parents or friends, as an engaged couple, without any objections from the party accused. There are many ways of expressing serious intentions without an open declaration of words. Conduct speaks louder than words.

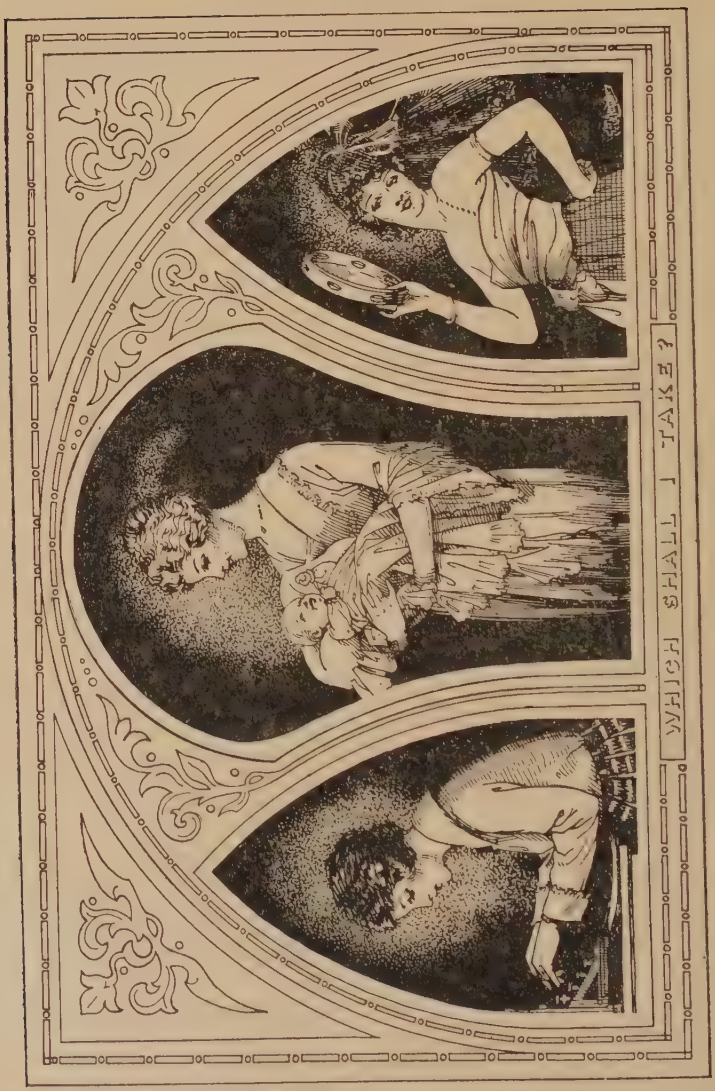
7. **Excuses for Breaking the Promises.**—A refusal may be justified on the ground of the bad character or conduct of the other party; poor health of either party is sometimes a good excuse, but not generally. If the woman were a widow or divorced, and concealed this fact from the man, this justifies a refusal to marry on his part.

8. **Time of Marriage.**—When a man promises to marry a woman without stating any special time, the law holds him guilty of breach of promise, unless he is ready to fulfill his engagement within a reasonable time; five years was held by law as being an unreasonable time.

9. **When a Promise is Not Binding.**—If either party is under twenty-one years of age, he or she is not bound by promise to marry and the law will excuse them any time from making good the promise; but, if the man is over twenty-one years of age, he can be held, and must make his promise good or pay the damages.

10. **Seduction.**—Seduction of a woman of lawful age under promise of marriage, and subsequent refusal to marry on his part, while not a crime, subjects the person so doing to heavy damages in a civil action for a breach of promise to marry, the seduction being used in aggravation of the ordinary damages allowed in actions for breach of promise to marry.

11. **Separation.**—The law allows agreements between husband and wife in which they agree to live separately. This does not in any way abolish her rights in his estate unless the contract so specifies.


WHICH SHALL I TAKE?

12. **Divorce.**—Divorces are of two kinds; namely, (a) absolute divorces, and (b) judicial separations. In the case of an absolute divorce the marriage is ended and the parties become single. A judicial separation is a limited divorce in which the court gives one party the right to live separately from the other. The decree of divorce makes provision for the payment of alimony, support of the children, residence, etc. The divorce laws of the several states vary and yet most states recognize and respect the laws of the other states. It is possible, however, to be legally married in one state and an adulterer in another; to have legitimate offspring in one state and illegitimate in another, all due to our senseless refusal to adopt a national code of marriage and divorce laws.

13. **Authority of Wife Living Apart From Husband to Bind Him.**—Whether or not the person who supplies a wife with necessaries has knowledge at the time of her husband's provision for her support, the presumpton of a wife's authorty to pledge her husband's credit is negatived by the fact of their living apart, and the tradesman who supplies her under such circumstances upon the credit of her husband, and without his express sanction or approval, does so at his own peril, and in order to charge her husband with supplies furnished her he must show that they were not only of the kind usually denominated "necessaries," because their need is common to all persons, but that in consequence of the inadequacy of the husband's provision, they were actually required for the wife's proper support, commensurate with his means, her wonted living as his spouse, and her station in the community. Bloomingdale vs Brinckerhoff. C. Common Pleas, N. Y. City and County, 20 N. Y. Sup. 858.

14. **Property Rights of Married Women.**—One of the marked evidences of the growth of true civilization in the United States is the legislative provisions enacted during the past fifty years for the benefit of married women. These legal enactments differ greatly in the different States, and there are frequent changes in some States, but all tend toward the releasing of woman from her former condition of absolute dependence upon her husband. By the old common law a married woman had few rights. She was subject to the authority of her husband, and he could rule over her, but the States have changed the common law and the

rights of married women are now recognized by every court.

1. All property owned by the wife before marriage, or received after marriage and held as her separate property, can be sold and transferred without the consent of her husband.

2. If a husband fails to make proper provision for the support of his wife, the law will compel him to furnish her proper support if he has sufficient property.

**15. General Principles Regarding the Marriage Contract.**—(a) There must be a serious agreement or mutual assent of both parties. (b) A marriage may be declared void because of fraud, incompetence of one of the parties, or underage. (c) At common law marriages at the age of 14 were legal, by statute the age is 21 for males, 18 for females. (d) A marriage is not void simply because it has been improperly performed or licensed, but those responsible are liable. (e) At common law a wife is solely responsible for her crimes unless they were committed in her husband's presence. In the states this law has been changed so that the husband is only responsible when he participated in the crime. (f) A married man can sue for the alienation of his wife's affections. In some states the wife has a similar right. (g) Either husband or wife may act as the agent for the other party. (h) The husband is not responsible for the debts or wrongs of his wife unless, of course, the debts are necessary for the support of the family. (i) The husband must provide a home; support, and protect his wife and children. His duty to protect his family carries with it all the rights of "self defense." (j) He must maintain law and order in his household, and may use force in preventing a member of his family from committing a crime. (k) A wife is required to care for the house and family. She cannot be forced to go into business or enter any gainful occupation. (l) The common law makes the husband the guardian of the children. In most states both parents are made guardians. (m) The husband must support his wife and she can pledge his credit for articles necessary to sustain life, preserve decency and maintain her social condition.

**16. A Married Woman's Signature.**—When signing a letter or a legal document a married woman should sign thus:

Margaret G. Saylor.

In the letter to a stranger she should add in parenthesis the name by which she is known to the world, thus

Margaret G. Saylor.
(Mrs. Delmer E.)

When registering at a hotel it should be written Mrs. Delmer E. Saylor and appear in that form on social stationery.

## INNKEEPER

**1. Definition.**—An Innkeeper is one who keeps a public house for the reception and entertainment of travelers.

**2. Gaining Admission to An Inn or Hotel.**—An Innkeeper is required to accommodate all comers with the following limitations:

(a) He can exclude any for whom he has no accommodation.
(b) He can exclude those who do not come at a suitable time or in a proper manner.
(c) He must exclude certain persons such as criminals, theives, etc.
(d) He may refuse admission to those who he may have reason to believe would disturb the peace and safety of his guests.
(e) He can expel any guest who does disturb the peace and safety of his other guests.

If he refuses to provide reasonable and proper accommodations he is liable. He need not provide any particular room. If he operates a stable or garage in connection with the Inn, he is under the same obligation to receive and care for the horses or automobiles of his guests.

**3. The Innkeeper's Liability.**—The law fixes the liability and responsibility of an innkeeper:

(a) An innkeeper is responsible for the loss or damage to a guest's baggage committed to his care unless caused by act of God, a public enemy, or the neglect or fault of the owner or his servants.

(b) In most states Innkeepers are relieved from liability for loss by fire unless the fire is caused by the negligence of the innkeeper or his servants.
(c) An innkeeper is liable for goods of a guest if they were stolen by the innkeeper's servants, by another guest, or by an outsider. However, he is not liable if the loss was due to the negligence of the owner or his servants.
(d) The innkeeper is bound to secure honest and trustworthy servants.
(e) If two guests occupy the same room, the innkeeper can be held responsible if a theft is committed by one against the other.
(f) If a horse dies while in an innkeeper's care, he must prove that he was not responsible for the death.

**4. Liens.**—An innkeeper has a lien on a guest's baggage or other property left in his care, to secure the payment for the accommodations.

**5. Regulations.**—An Innkeeper may make regulations for the observance of his guests in order to protect their property. Thus he may limit his liability somewhat by posting notices that he is not responsible for the loss of valuable articles unless they are deposited with him. Such regulations will bind the guest if brought to his notice.

**6. Lodging and Boarding Houses.**—The keepers of lodging or boarding houses do not come under the same head as innkeepers as far as the law is concerned. They are not required to accommodate all who may apply. They are not liable for refusing to accommodate all comers.

## INSURANCE

### A. Fire Insurance

**1. Definition.**—Fire insurance is furnishing indemnity against loss by fire. It is now generally conducted by large private companies or by mutual companies.

**2. Mutual Companies.**—These mutual companies are generally established by statute and provide for the payment of losses by a pro rata assessment upon the policy holders, who constitute the stockholders and who manage the affairs

of the company. Some of these mutual companies require a small premium paid in advance, which, unless unusual losses occur, is enough to pay all the losses for the year. Others simply require a small fee to pay for the expense of making the survey and issuing the policy. All of them, however, in case of a loss make an assessment pro rata upon the policy holders to pay the same. Such companies are not very common in cities, but are quite general throughout the rural districts.

3. **Stock Insurance Companies.**—The insurance business of private corporations is carried on with the idea of profits. After the overhead expenses and the losses have been paid, the balance is paid to the stockholders of the corporation in the form of dividends. These companies have agents established in nearly every town and city of any size throughout the country.

4. **Underwriters' Association.**—The old line insurance companies of the country are nearly all united into a National Underwriters' Association which has general charge of the fire insurance business of the country. Under this national board the old line companies doing business in each State have an Underwriters' association which has charge of the insurance business in the State. In nearly every town or city of any size the agents of the respective companies are also organized into local boards. The agencies of the different companies are all required by an iron-bound contract to maintain the rates of insurance fixed by the State board of underwriters, and violations of the provisions of this contract are punished by heavy fines. By these agreements agents of the different companies are prohibited from cutting rates or offering inducements to secure insurances and they are limited to a fixed rate of the premium as their commission. Nearly every town of any size in the respective States is rated, that is the rates of insurance upon all the commercial buildings and the stocks contained therein are fixed and a rate sheet issued to the agents of all companies doing business in the town. This rating is not done by the local agents of the company living in the town or city, but is done by agents appointed by the State board of underwriters and sent there for the purpose.

5. **The Purpose of Fire Insurance.**—Fire Insurance is a means of distributing the cost of fires. A fund is supplied

FIGHTING THE RED PLAGUE.

by the payment of premiums, from which the Insurance Company agrees to pay the loss in case of fire.

**6. Classification.**—In order that each person thus protected from loss may contribute the proper amount of this fund, a system of classification has been worked out, whereby the premium "rate" has been established. This classification is based on the probability of fire. The National Board of Fire Underwriters, having before them the reports of the various Insurance Companies, know the probable number of fires there will be, and the value of the property involved. Statistics show that a certain percentage of farm residences, barns, schools, merchandise, etc., will be burned each year. Also that buildings of one construction are more likely to burn than of some other type of construction. Population, water pressure, fire department, building contents, and many other things are taken into consideration by the National Board in determining the rate each person must pay for insurance on his property.

**7. Reducing the Rate.**—Therefore, when you pay your premium, you can judge, by the rate you pay, what the experience of the Insurance Companies has been with regard to similar property, with similar conditions. If the rate is high, find out just what factors make it high. Then you will be able to make such changes or take such precautions that your rate will be reduced, and that will make you more secure against loss. It is far better to prevent a fire, than to collect insurance after the fire.

**8. Who Has An Insurable Interest.**—In order to be indemnified against loss the insured must have an interest in the goods insured, both at the time the insurance is issued and at the time of the loss. Thus the following may be insured:

a. A bailee (one who receives goods of another to hold.)
b. A consignee (one to whom property is assigned.)
c. A mortgagee (one who holds a mortgage on real or personal property.)
d. An assignee (one to whom property is assigned.)
e. A warehouseman.
f. An executor or an administrator.
g. A landlord.
h. A tenant.

i. The holder of a lien on property.
j. An agent who has the custody or care of the principal's property.

All these as well as many others, have what is called an insurable interest. If this interest has been destroyed at the time of the loss, the company is not liable. The same rule holds good if the article insured did not exist at the time of making the contract.

9. **An Insurance Policy is a Contract** between the Insurance Company and the insured, by which the first party insures the property of the second party against loss by fire. The consideration or premium is usually paid when the policy is issued, although it may be charged on account or paid by check or note. The contract becomes binding and valid when the policy is properly executed. Actual delivery of the policy to the insured is not necessary. Thus if a loss occurs after the duly executed policy is in the hands of the Insurance Company's agent, but before it has been delivered to the insured, the company must pay the loss. A preliminary contract is sometimes made in which case the risk begins immediately upon the signing, even though such contract be dated several days before the policy is actually issued. Most local agents have authority to protect an applicant for insurance against loss for a period of 5 days preceding acceptance of the risk by the company.

10. **Cancellation.**—A fire insurance contract, like any other may be cancelled by mutual agreement, but unless otherwise stated in the policy the company cannot cancel the contract without the consent of the policy holder.

11. **General Principles.**—

a. The property insured, and the terms of the contract must be clearly defined.
b. If the written part of the policy contradicts the printed sections, the written part will hold.
c. Clerical or typographical errors may be corrected when discovered.
d. The insurance on a building covers those things which have become a part of it, but does not include fixtures or surrounding sheds or buildings.
e. Misrepresentation or fraud on the part of either party renders the insurance policy null and void.

f. If a policy holder secures additional fire insurance on his property without the consent of the insurance company, his former policy becomes void. Most policies today, however, consent to the writing of additional insurance on the property by other companies and in case of loss the liability is pro-rated.

g. In addition to the actual fire loss most policies cover damage by water used to put out the fire, damage to goods while being removed to avoid fire, and damage from an explosion caused by fire.

h. An insurance company is not responsible for goods stolen while they are being removed during a fire.

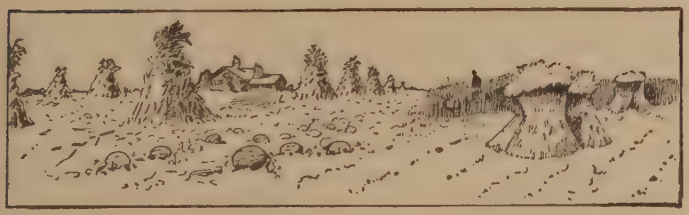
i. An ordinary policy of insurance does not usually insure against lightning, but lightning clauses without extra expense will be attached to nearly all policies if requested at the time of issue.

j. The insurance company is not relieved from liability by the carelessness of the policy holder, yet the insured is bound to take reasonable care to prevent fire.

k. In a total loss the Insurance Company is liable for the full value of the property provided that this value does not exceed the amount of the Insurance. In a partial loss the Company is liable only for the actual loss.

l. In an **open policy** the amount of the insurer's liability is not fixed until after the loss. In a **valued policy** the maximum liability for a total loss is fixed.

m. The following table shows the proper method of obtaining a proof of loss:



### Formula For 100 Per Cent Proof of Loss in Case of Fire

Inventory (as of certain date)
plus
Incoming Invoices (for goods bought subsequent to inventory)
plus
Freight and Dray Bills on same
plus
MINUS
Credit Memorandums (for merchandise returned)
plus
Production Department Payrolls in manufacturing business)
plus
Appreciation (increase in value of goods since purchased).

Outgoing Charges (representing goods sold since Inventory extended at present cost)
minus
Depreciation (decrease in value of merchandise)
minus
EQUALS
Value of goods or Proof of Loss
Salvage (market value of goods not destroyed).

## B. Life Insurance

**13. Definition.**—Life insurance is a contract whereby the insurer agrees, on the payment of a fixed premium, to pay to the insured at his death or when he reaches a certain age, a certain sum of money. Thus it is possible for a man to insure his productive ability for the amount of money it would be worth to him if he were to survive his expected time. (See table of expectancy below.)

### Life Expectancy Table

**This table is condensed from the extensive Life Expectancy Tables of Glover.**

**14.** The approximate number of years the average person (male or female) may expect to live at different ages is shown in the following table:

| Age Years | Males | Females |
|---|---|---|
| 1 | 50.0 | 53.0 |
| 5 | 56.0 | 58.0 |
| 10 | 52.0 | 54.0 |
| 15 | 47.5 | 50.0 |
| 20 | 43.0 | 45.0 |
| 25 | 39.5 | 41.0 |
| 30 | 35.5 | 37.0 |
| 35 | 31.5 | 33.0 |
| 40 | 28.0 | 30.0 |
| 45 | 24.5 | 26.0 |
| 50 | 21.0 | 22.5 |
| 55 | 17.5 | 19.0 |
| 60 | 14.5 | 15.5 |
| 65 | 12.0 | 12.5 |

| | | |
|---|---|---|
| 70 | 9.0 | 10.0 |
| 75 | 7.0 | 7.5 |
| 80 | 5.4 | 5.7 |
| 85 | 4.1 | 4.3 |
| 90 | 3.1 | 3.2 |
| 95 | 2.5 | 2.5 |
| 100 | 1.9 | 2.0 |

Life expectancy is not a matter of chance (barring accidents) nor of fate. It is a matter entirely within our own control. The normal life expectancy at one year ought to be 100 years instead of 50 years. The average man may easily double his life expectancy by "biologic living."

15. Applications.—Nearly all life insurance companies require applications therefor to be in writing and they are usually accompanied by a medical examination made by the Local Medical Examiner of the company. These applications are forwarded to the home office, and if the same pass the head Medical Examiner the policy is issued to the insured and the application is made a part of the policy. Any false statement contained therein will vitiate the policy and applicants for insurance should be careful to see that all questions are fully and truthfully answered. Most life insurance policies provide that the insurance shall not be in force until the first premium is paid, and most policies are now incontestable after the payment of two or three premiums. By the laws of all of the States in case default is made in the payment of premium after three full premiums have been paid, the policy holder may have the option of securing a paid up policy for a certain portion of the original risk, and all good companies now insert an option of this character into their policies. Sometimes the policies provide that after the payments cease the applicants shall be entitled to three or four years' paid-up insurance.

16. The Policy.—The usual clauses contained in life insurance policies are these: That the insurance ceases unless the premiums are promptly paid; that the company shall be exempt if the insured commits suicide whether sane or insane, or if death shall come by the hands of justice for a violation of law; that agents are not authorized to alter or discharge any part of the contract; that assignments of the policy shall not take effect until notice thereof shall be given to the company at its home office; that after two years the policy will be incontestable except for fraud or non-payment of premium.

**17. An Insurable Interest.**—In order to be valid an insurance policy must be for the benefit of one who has an insurable interest, otherwise the contract is void as being a wager policy. The following are held to have such an interest:

a. Father and minor child.
b. Husband and wife.
c. Sister and brother.
d. A creditor in the life of his debtor.
e. A person who invests money relying on the efforts of another, has an insurable interest in the other person's life.
f. A surety in the life of his principal.
g. A common carrier in the life of his passengers.

The relationship of uncle or aunt and nephew or niece, or that of cousins is not sufficient.

**18. Kinds of Policies.**—There are numberless kinds of life insurance policies. Among the more common we find the following:

a. **Ordinary Life Policy** in which premiums are paid during life and the face of the policy is payable at death. This is the simplest and cheapest form.
b. **Limited Payment Plan.**—The face of the policy is payable only at death, and premiums are payable only for a limited period of years, or until death if it occur within that period.
c. **Endowment Policy.**—The insurer agrees to pay a fixed sum at the end of a fixed term of years, or at death if it occur before the expiration of the term, provided a fixed premium is paid during the entire term.
d. **Convertible Term Policy** insures against death for a limited term of years, and may be converted into any other form of insurance without medical examination within a stated period.
e. **Income Policies** may be issued on any of the other plans with a provision that the face value of the policy is to be paid in monthly installments instead of in a lump sum.

**19. General Principles:**

a. Unless forbidden by statute, a life insurance policy may be assigned to one having an insurable interest, and to a person without such an interest

provided that the assignment is made in good faith. An assignment is often made for the benefit of creditors, or as security for the payment of a debt.

b. A contract for insurance does not take effect until it has been accepted by the company, and deposited in the mail for delivery to the insured.

c. A general agent can bind his principal even against the express terms of the policy provided that the insured was not negligent in failing to advise himself concerning the terms.

d. To be valid, the first premium must be paid and the policy holder must be alive and in good health when the policy is delivered.

e. A life insurance contract may be void on account of a mistake in issuing it, on account of violation of statute, on account of fraud by either party, or if the policy is contrary to public policy.

f. Words or figures written or printed on the margin or on the back of the policy, or on a slip attached to the policy must be considered as part of the agreement.

g. The payment of premiums to an agent will bind the company, unless the insured has received notice to the contrary.

h. A policy may be cancelled by mutual agreement and the insured is then entitled to the surrender value of the policy.

### C. Other Forms of Insurance

**20. Marine Insurance.**—Marine insurance is governed largely by the same rules that control fire insurance. This form of insurance may include all casualties resulting from the unusual or violent actions of the elements, foundering at sea, grounding, collision, fire, perils of war, rests and restraints, jettison, and any other perils, losses, or misfortunes of the sea.

**21. Accident Insurance** is now over fifty years old and there are a great many companies which insure against all kinds of accidents. Upon payment of small premiums, policies may be had insuring against accident from one day to ten years, for any reasonable amount. The rates depend upon the occupation of the insured.

22. **Fraternal Insurance.**—This is one of the oldest forms of insurance, originating with the ancient secret societies. Originally the societies assumed an obligation to pay sick and death benefits to their members. Today there are numerous substantial societies who issue standard life insurance policies, with a fixed premium rate and a limited amount of insurance payable at death.

23. **Industrial Insurance.**—Many large business organizations issue this form of insurance for the benefit of their employees. The amounts are usually small and the weekly payments deducted from the wages of the insured.

24. **Other Kinds of Insurance** include employers' liability, public liability, tornado, explosion, automobile, burglary, fraud, insolvency and loss through bad debts. Almost every kind of risk imaginable may now be covered by insurance.

**Assignment of Policy of Insurance.**

Know all men by these presents, that I, ....., of the village of....., for and in consideration of....., to me in hand paid by ..... of the same place, the receipt whereof is hereby acknowledged, have sold, assigned, transferred, and set over, and by these presents do sell assign, transfer, and set over, unto the said..... the policy of insurance, known as policy No.....of the.....Insurance Company, and all sum and sums of money, interest benefit and advantage whatsoever, now due, or hereafter to arise, or to be had or made by virtue thereof, to have and to hold the same unto the said.....and his assigns forever.

In witness whereof, I have hereto affixed my hand, this June, 20, 19....

(name)

(Acknowledgment.)

## INTERNATIONAL LAW

1. **Definitions.**—International law is the law which governs the conduct of the civilized nations of the world. It regulates the actions of one nation towards another, defines right and wrong, and prescribes rules for peace and war. International law is intended to do for nations what the domestic law does for individuals.

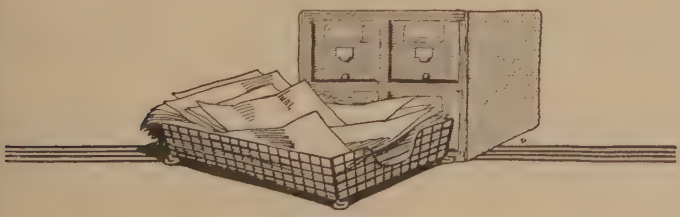
2. **Treaties.**—Treaties form the great bulk of international law. A treaty is an agreement between two or more nations to adjust differences and to govern future conduct. They are made for a limited period of years but a treaty made by one administration is binding upon the following administration.

3. **Representatives.**—Ambassadors are the authorized diplomatic representatives of nations. They are immune from civil or criminal liability, but are tried for crimes by their home governments. A consul is a commercial representative sent by one nation to another to develop international trade. He is personally liable for his actions.

4. **The Law of Nations.**—There are certain well established principles of international law which provide as follows:

a. One nation cannot interfere with the internal affairs of another.
b. Crimes committed on the high seas are under the jurisdiction of the nation under whose flag the ship sails.
c. The property of alien enemies is subject to confiscation.
d. A neutral country must be fair and impartial in its relation with warring nations.
e. It is a violation of international law for a warring nation to fight on or cross the territory of a neutral power.
f. It is also a violation of international law to carry the necessary finished goods or materials of warfare to a combatant nation.
g. A fugitive criminal cannot be brought back from another nation unless the terms of the treaty between the two nations so provide.
h. Confiscation is the penalty for violating a blockade in time of war.

5. **Passports.**—A passport is a document granted by the government to a citizen, commending him to the protection of foreign countries he may visit.



## LICENSE

1. **Definitions.**—License is a right or permission given by competent authority to do something which would otherwise be unlawful. The **licensor** is the one who grants the license. The **licensee** is the one to whom the license is issued.

2. **Kinds of Licenses.**—Licenses are of almost infinite variety and are issued not only by the National Government, but by states, counties, cities, towns, and villages. They may be issued to manufacturers or dealers in certain articles, such as cigars, liquors, proprietors of amusement places, peddlers, hawkers, draymen, bus drivers, expressmen, itinerant merchants, cab drivers, etc. Such licenses are issued under what is known as the police power of the state.

3. **Illegal Licenses.**—Cities commonly require the illegal payment of a local license to salesmen or canvassers who are taking orders for goods to be shipped from another state to be delivered at some future time. The supreme court has held such a license requirement as in restraint of interstate commerce, and therefore, illegal. Nevertheless, through ignorance on the part of the authorities many cities attempt to enforce their local ordinances.

4. **Land License.**—Another important license is called **Land License** which is an authority to do something on another's land without acquiring ownership therein. This authority may be oral or in writing. A land license may be for the purpose of erecting a building, running a tile, pasturing land, cutting wood, or merely for passing over the land.

5. **General Principles.**—The laws governing land license are as follows:

(a) It may be in writing under seal, oral, or merely implied.
(b) A merchant licenses the public to enter his establishment.
(c) A land license is revokable at the will of the grantor.
(d) It cannot be assigned to another.
(e) In case a land license is revoked, the licensee may within a reasonable time remove buildings or other movable articles which he has placed on the land.

(f) A Licensee is required by law to refrain from acts injurious to the licensor.

6. **Marriage Licenses.**—All States require a marriage license. The person who performs the ceremony is required by law to note the fact of the marriage on the face of the license and to return it to the county recorder for record.

### Form of License

**By Authority of the City of Chicago.**

Permission is hereby given to John Henry to keep for use or hire two Automobiles in the City of Chicago, State of Illinois, from July 1, 19...., to June 30, 19...., under the ordinances in such case made and provided, subject, nevertheless, to revocation or suspension by the mayor or City Council.

Witness the hand of.....Mayor of said City, and the Corporate Seal thereof, this 1st day of July, 19....

(Corporate Seal.)

ATTEST:

.....

.....

Mayor.

City Clerk.

### License to Construct a Tile

Know all men by these presents, that I, ..... of ..... for the consideration hereinafter expressed do hereby grant unto..... of .....the right to lay and perpetually maintain a 12 inch tile drain over and upon the following described property, to-wit: (Description of property.)

In consideration for the rights herein granted the said..... by its acceptance thereof agrees to pay the sum of $.....payable whenever and as soon as the tiling has been completed.

In witness whereof, I have hereunto set my hand and seal this..... day of ....., 19....

(Add Acknowledgment)

Seal.

.....

## LIENS

1. **A Lien** is a legal claim. It includes every case in which either real or personal property is charged with any debt or duty. In other words, it is the right to hold possession of property until some claim against it has been satisfied.

2. **Possession** is always necessary to create a lien except in case of mortgages and judgments. The lien simply extends to the right of holding the property until the debt is satisfied. The property cannot be sold without the consent of the owner, except by order of the court.

3. **Law.**—The existence of a lien does not prevent the party entitled to it from collecting the debt or claim by taking it into court.

4. **Parties Entitled to Liens.**—Warehouse men, carpenters, tailors, dyers, millers, printers, etc., or any persons who perform labor or advance money on property or goods of another have a lien on same until all charges are paid.

5. **Hotel Keepers** have a lien upon the baggage of their guests, whom they have accommodated.

6. **Common Carriers Have** a lien on goods carried for transportation charges.

7. **Agents** have a lien on goods of their principals for money advanced.

8. **How to Hold the Lien.**—Never give up possession of the property until the debt is paid.

9. **Real Property.**—If the debt is on a house, barn or other real property, file a lien on the whole property, and have it recorded in the County Recorder's office. The claim then partakes of the nature of a mortgage.

10. **Mechanic's Lien.**—Nearly all the states have enacted special laws to protect mechanics and material men, who may furnish material and labor for the erection, construction, repair and improvement of buildings situated thereon. The method of securing these liens and enforcing them in the different States varies so widely that it is almost impossible to give such a statement as will cover all States. The courts have construed such laws very strictly and in order to entitle a person to such lien the provisions of the law granting the same must be strictly complied with. Mechanics and material men desiring to avail themselves of these statutes would better consult some good lawyer and have him prepare the necessary papers. The following form is the one commonly in use in the State of Illinois:

### Form of Mechanic's Lien.

STATE OF ILLINOIS,
DU PAGE COUNTY. ss. In the Circuit Court, Du Page County.

Julius Warren,
vs.
Martin Smith.

Claim for Lien.

Julius Warren, being first duly sworn, on oath, says that he is the claimant above named, and that the attached "Exhibit A," is a just and true statement of the account due him from said Martin Smith for labor and materials furnished said Martin Smith at the times in said statement

mentioned, which various amounts are due and payable to him from and after the respective dates thereof; and affiant says that the labor and materials in said statement mentioned were used in the construction and improvement of a two-story frame building situated upon the following described premises in the County of Du Page and State of Illinois, to-wit: Lot two (2), in Block three (3), of the original town of Hinsdale.

And affiant says that there is now due and owing to said Julius Warren from said Martin Smith, at whose request said material and labor was furnished as aforesaid, after allowing to him all just credits, deductions, and set-offs, the sum of $500, for which amount said Julius Warren claims a lien upon the above described premises.

Subscribed and sworn to before me this 29th day of February, A.D., 19..

JOHN SMITH,
Notary Public. Julius Warren

N. B.—The foregoing statement should be signed and sworn to before some officer authorized to administer oaths, and filed with the Clerk of the Circuit Court of the County where the real estate is situated, and a suit to enforce the same must be begun within two years from the date of the completion of the contract.

## LEASE

1. **Definitions.**—**Landlord and Tenant** is a term used to denote the relationship which exists by virtue of a contract expressed or implied between two or more persons for the possession or occupation of lands or tenements either for a definite period of life or at will. The **Landlord** or **lessor** is the person who lets the premises. The **Tenant** or **lessee** is the one who occupies the land or premises. A **Lease** is the contract between the two.

2. **Leases Should be in Writing.**—Leases which are to run for more than a year or which are not to be performed within a year must be in writing, or they are absolutely void. Leases for a year or less and which can be performed within a year are valid if not in writing. To avoid misunderstandings, disputes, and possible litigation it is always best that the lease be in writing and signed by both parties.

3. **Leases for life** are those which are terminated either by death of the Lessee or of some other person living at the date of the lease. Unless such leases contain covenants to the contrary the life Tenant or the Lessee is required to pay all taxes on the premises and keep the same in repair.

4. **Leases for Years.**—The Lessor, unless it is otherwise expressly provided in the lease, is under obligations to put the tenant in possession and see that his possession is not disturbed by any title paramount to his landlord's. He is

not required to make repairs unless he so stipulates in the lease, nor is there an implied contract on his part that the premises are fit for the purpose for which they are let. He must pay all taxes regularly levied and assessed against said premises and keep the buildings on said premises insured at his own expense if he desires to carry insurance.

5. **Implied Agreement by Tenant.**—Where there is no agreement to the contrary, the tenant is bound to take possession of the premises, take ordinary care of the same, keep them in a tenantable condition, and make repairs made necessary by his negligence, except injuries resulting from wear and tear and inevitable accident.

If the premises leased be a farm, he is also required to cultivate the same in the manner required of good husbandry. He must not commit waste, alter buildings or fences, and must surrender up the premises at the end of his term in as good condition as when entered upon originally, wear and tear excepted. He is not required to pay taxes or keep buildings insured, but must pay the stipulated rent at the time it becomes due by the terms of his lease. If no time is specified in his lease, then the rent is due at the end of the term. He may underlet the premises or assign the lease unless his lease contains covenants to the contrary.

If he places permanent improvements upon the premises which are so attached to the buildings or land that they cannot be removed without injury, he has no right to remove the same unless his lease so provides. He may remove trade fixtures if the same are removed from the premises before the expiration of his lease.

6. **Special Covenants.**—The usual covenants contained in the ordinary lease provide for the yielding up of the possession of the premises at the end of the term without notice, in as good condition as when the same were entered upon by the Lessee, loss by fire, inevitable accident and ordinary wear excepted. There is also usually a covenant providing against underletting or assigning the lease, and a covenant that in case of non-payment of rent, or failure to perform any of the covenants of the lease the Leassor shall have the right to determine said lease and recover possession of the premises.

Farm leases usually provide, in addition to the covenants above mentioned, that the tenant shall keep the fruit and

ornamental trees, vines and shrubbery, free from injury of stock and from plowing or otherwise; that the Lessee will draw out the manure and spread it on the premises; that no straw shall be sold and removed from the premises during the term or at its termination; that the tenant will keep the buildings and fences in repairs, the landlord to furnish necessary material; that the landlord may do fall plowing on the stubble ground after the grain has been removed therefrom, and that he may enter for the purpose of making repairs, viewing the premises and sowing timothy seed.

Sometimes the landlord covenants to make all new fences, to furnish water and many other provisions which may be inserted as the occasion may require.

7. **Termination of Lease.**—Under the strict rules of the common law the landlord might terminate the lease for non-payment of rent, but in order to do so it was necessary for him to go upon the premises and make a demand for the exact amount of rent due upon the very day that the rent came due, and a failure to do this waived the right to declare forfeiture. This strict rule of the common law has been modified in nearly all the States so that it is no longer necessary to make a demand for the rent on the day the rent comes due. Instead of this most of the States provide that before the landlord shall declare a forfeiture a demand in writing, for the amount of rent due, shall be served upon the tenant, and he be notified that in case he fails to pay the same within a fixed time, generally five or ten days, the landlord will elect to terminate his lease; in such cases the tenant has until the end of the last day fixed in the notice to pay the rent and save the forfeiture.

The statutes of the various States also provide that in case of breaches of other covenants contained in the lease, notice of such breach and intention of the landlord to declare forfeiture of the same shall be served upon the tenant to quit and deliver up possession of said premises within a time, generally not less than ten days.

8. **Termination of Tenancy From Year to Year and Month to Month.**—Where a tenant has a lease for a year of premises with annual rent, and at the end of his term holds over without a new agreement, the law construes this to be a leasing from year to year, and such tenancy at com-

mon law could only be terminated by either party giving the other six months notice prior to the end of any year. This notice has been changed by a statute in Illinois to sixty days prior to the end of any year, and a shorter time has also been fixed in many other States.

A tenant who has a lease of property for one or more months with monthly rent, who holds over after the termination of his lease, is termed a tenant from month to month, and such relation can only be terminated by either party giving the other thirty days' notice of his intention to terminate the tenancy. Such notice to be given thirty days prior to the end of any month.

**9. Demand.**—It is a general rule, subject to few exceptions, that in order to get possession of property where the inception of the tenant was lawful, either a notice to quit or a demand for possession is necessary on the part of the owner before commencing proceedings to get possession.

**10. Securing Possession.**—When a lease has been terminated either by its term or by notice, and the landlord is entitled to possession, the most common method of recovering possession is to commence an action of forceable entry and detainer against the tenant for the possession of the premises. This may be done before a Justice of the Peace by filing a complaint and having a summons issued. If the possession of the tenant was lawful in its inception the Landlord has no right to forcibly dispossess him, and if he does so it is at his peril. Taking possession by force subjects the landlord to an action for heavy damages.

Leases sometimes contain clauses that where a forfeiture has taken place the landlord shall have the right to take possession of the premises leased by force if necessary. Such covenants, however, cannot be enforced and do not justify the landlord in using force, and the only course to pursue is to begin an action and recover a judgment for possession and have the constable or sheriff legally put the landlord in possession.

**11. Distress for Rent.**—The usual and most effective method of collecting rent is by distress warrant. This is a warrant issued by the landlord to some third person, authorizing and empowering such third person to levy said warrant upon any property of the tenant for the satisfaction of the rent. This remedy is the most common and effective, as it enables the landlord to get a lien upon the

property of the tenant without delay, and the process is of very ancient origin.

The statutes of most of the States provide for this remedy and the mode of procedure after the levy of the warrant is generally prescribed by the statute. In general it is the duty of the officer, as soon as the levy is made, to file an inventory of the property levied upon with some court together with a copy of his warrant, and usually a summons from said court is issued against the tenant in favor of the landlord and the suit then proceeds much after the manner of suits in attachment.

12. **Time of Levy.**—Under the Common Law the tenant had all of the day on which the rent came due within which to pay the same and a distress could not be levied until the day after the rent came due. In Illinois, however, in case the tenant sells or attempts to dispose of the crop grown upon the premises so as to endanger the landlord's lien for his rent, a distress warrant may be levied before the rent comes due. Many of the statutes of the other States contain provisions of a similar character. The person making the levy should be careful not to levy on more property than is necessary in order to satisfy the rent due, otherwise he will be liable to the tenant for making an excessive levy.

13. **Landlord's Lien.**—Under the Common Law the landlord had no lien upon the property of the tenant until a distress warrant was actually levied upon the property of the tenant. Most of the States, however, now provide that the landlord shall have a lien upon all the crops grown upon the leased premises until the rent of the year in which said crop was grown has been paid, and this lien is ahead of all other liens; even though an execution may have been levied upon such crops, the lanlord's lien is paramount until the rent is satisfied. The usual method of enforcing the lien of the landlord is by distress warrant levied in the manner hereinbefore described.

**The Courts Have Held:—**

(a) Unless the tenant makes a specific agreement relieving himself, he is liable for the rent of the building after it has burned down, just as if he were still occupying it.

(b) When the terms of a lease are in doubt, the courts construe them in favor of the tenant.

(c) A lease expiring on a specified day continues through the whole of that day.

(d) A tenancy in fact may be created when the tenant continues to occupy the premises with the consent and knowledge of the landlord, after the expiration of the lease. Such a tenancy in fact carries with it all the rights and all the liabilities of a regular lease.

(e) A lease may be made to take effect at some future date.

(f) A lease for 100 years is invalid, but a lease for 99 years is legal.

(g) A lease must clearly define the property, but no special form or wording is necessary.

(h) Valid leases may be made by minors, married women, corporations, executors, administrators, or trustees, subject to certain restrictions. However, there is always uncertainty in a contract with a minor.

(i) A lease for an unlawful purpose is void.

(j) As in other contracts, if the printed and the written parts of a lease do not agree, the written part will hold.

(k) The lease of a private house is not a warranty that it is fit to be occupied.

(l) When a landlord agrees to keep the building in repair and fails to do so the tenant's only remedy is to sue for damages.

(m) When a tenant is evicted he is excused from the payment of rent. Any act by the landlord which renders the property unfit for or impossible of occupancy, is an eviction.

(n) If land is rented on shares the relation of landlord and tenant usually exists even if the rent is paid in produce instead of cash.

(o) The landlord is liable for defective stairways, open elevator shafts or other dangerous conditions which exist in the parts of a rented building which are under his control.

## Standard Forms for Leases

### A Lease for Renting a House.

KNOW ALL MEN BY THESE PRESENTS:

That I have. this sixth day of September, 19...., let and rented unto Andrew Jay my house and premises, number 142 on Archer Street, in the town of Livermore. and State of Iowa, with the sole and uninterrupted use and occupation thereof for one year, to commence the first day of May next, at the monthly rent of fifty dollars, payable in advance.

Witness my hand and seal,

J. W. GLASGOW. (Seal.)

### Short Form of Lease.

John Parks leases to J. B. Moulton (description of premises) for a term of.....upon the payment of.....Dollars.

Dated this 1st day of August, 19.... J. K. MILLER.

### Common Form For City and Country Property.

THIS INDENTURE, Made this 15th day of July, A. D. 19...., between John Doe of Decatur, Ill., party of the first part, and Richard Roe of the same place, party of the second part, Witnesseth, That the party of the first part, in consideration of the covenants of the party of the second part, hereinafter set forth, does by these Presents, lease to the party of the second part the following described property, to-wit: Lot one (1) in Block Ten in the original Town of Decatur in the City of Decatur and State of Illinois, TO HAVE AND TO HOLD THE SAME, To the party of the second part, from the 15th day of July, 19...., to the 15th day of January, 19.... And the party of the second part, in consideration of the leasing the premises as above set forth, covenants and agrees with the party of the first part to pay the party of the first part, at First National Bank, Decatur, as rent for the same, the sum of.....payable as follows, to-wit:

AND THE PARTY OF THE SECOND PART covenants with the party of the first part, that at the expiration of the term of this lease..... he.....will yield up the premises to the party of the first part, without further notice, in as good condition as when the same were entered upon by the party of the second part, loss by fire or inevitable accident and ordinary wear excepted.

IT IS FURTHER AGREED by the party of the second part, that neither .....he.....nor his legal representatives will underlet said premises or any part thereof, or assign this lease without the written assent of the party of the first part first had thereto.

AND IT IS FURTHER EXPRESSLY AGREED between the parties hereto, that if default shall be made in the payment of the rent above reserved, or any part thereof, or any of the covenants or agreements herein contained to be kept by the party of the second part, it shall be lawful for the party of the first part or his legal representatives, into and upon said premises or any part thereof, either with or without process of law, to re-enter and re-possess the same at the election of the party of the first part, and to distrain for any rent that may be due thereon upon any property belonging to the party of the second part. And in order to enforce a forfeiture for non-payment of rent it shall not be necessary to make a demand on the same day the rent shall become due, but a failure to pay the same at the place aforesaid or a demand and a refusal to pay on the same day, or at any time on any subsequent day, shall be sufficient; and after such default shall be made, the party of the second part and all persons in possession under him shall be deemed guilty of a forcible detainer of said premises under the statute.

AND IT IS FURTHER COVENANTED AND AGREED between the parties aforesaid, .....

.....

The covenants herein shall extend to and be binding upon the heirs, executors and administrators of the parties to this Lease.

WITNESS THE HANDS AND SEALS of the parties aforesaid, the day and year first above written.

JOHN DOE. (Seal.)
RICHARD ROE. (Seal.)

### Lease of Furnished Rooms.

Memorandum. It is agreed by and between.....and....., as follows, viz. : The said.....in consideration of the rent hereinafter mentioned and agreed to be paid to him, hath letten to the said.....one room, up two flights of stairs forward, part of the now dwelling-house of the said.....situate on.....Street, in the city of....., together with the furniture at present standing therein—that is to say: (insert furniture.) To hold to the said .....for the term of two years, to commence from....., 19.... at the yearly rent of...., to be paid quarterly to the said.....

The said ....., in consideration hereof, agrees to pay the aforesaid yearly rent of....., at the times above limited for payment thereof; and at the end of the term or in case of any default in the payment, shall and will, on the request of the said....., or his assigns, immediately yield and deliver up to him or them, the peaceable and quiet possession of the said room, together with the whole furniture he, from the first entrance thereon, there found and possessed, in good, and sufficient plight and condition, reasonable wear and tear only excepted.

In witness whereof the parties have signed this agreement, this..... day of ....., 19....

.....
.....

### Farm Lease—Money Rent.

THIS INDENTURE made and entered into this.....day of..... .....A. D. 19...., between.....of the first part, and .....of the second part, WITNESSETH, That the party of the first part, for and in consideration of the covenants and agreements hereinafter mentioned, to be kept and performed by the party of the second part, has, by these presents, demised and leased to the party of the second part, the following described land, to-wit: (here give description) in the County of.....and State of.....and containing about.....acres.

TO HAVE AND TO HOLD THE SAME to the party of the second part, from the .....day of.....A. D. 19...., to the ..... day of.....A. D. 19.... And the party of the second part, in consideration of the leasing of the premises as above set forth, covenants and agrees with the party of the first part, to pay the party of the first part, at.....the sum of.....dollars, as rent for the same, in the manner following, that is to say.....

And the party of the second part covenants with the party of the first part, that at the expiration of the term of this lease, he will yield up the possession to the party of the first part, without further demand or notice, in as good order and condition as when the same were entered upon, by the party of the second part, loss by fire, or inevitable accident, and ordinary wear excepted.

And it is further expressly understood and agreed between the parties hereto, as follows:

1st. The party of the second part covenants to farm said premises in a husband-like manner, and to raise the greatest amount of grain thereon, the nature of the soil and season will permit; and further, to break up and improve as much of the waste land as may be in condition to plough.

2nd. The party of the second part shall haul out and distribute upon the poorest soil on said premises, all the manure and compost suitable to be used; such manure as is unfit for use to be left upon said premises; and further, not to burn any stalks, or straw, or stubble, on said premises.

3rd. The party of the second part shall preserve and keep the fruit and

ornamental trees, vines and shrubbery that now are or shall be planted on the premises, from injury by ploughing, or from cattle, horses, sheep or otherwise; and further, to keep said premises free from brush and burs, and shall also keep all necessary ditches and drains ploughed and cleaned out during the continuance of this lease.

**4th.** The party of the second part shall keep said premises, including the hedges and fences, in proper and necessary repair, provided that the landlord shall furnish at .....station such material as he or his agent may consider needful to repair the said premises, within a reasonable time after being notified—and the party of the second part shall haul said material to said premises without charge.

**5th.** And the party of the second part further covenants not to remove any of the grain raised on said premises during the term of said lease, until the rent herein specified shall be fully paid; nor to sell the same or any part thereof; and if any grain raised on said premises during said term, shall be removed, or attempted to be removed, by any person or persons, before the payment of said rent, or if the party of the second part shall sell or attempt to sell said grain or produce, or any part thereof; or if the same or any part thereof shall be claimed or attached, or levied upon by execution, or claimed by any other person or persons, upon any pretense whatsoever, before said rent shall be fully paid, then upon the happening of any of said contingencies, said rent shall immediately become due and payable, and the said party of the first part, or his legal representative, shall have the right to enter into the said premises and to take possession of the said grain, or wherever else the same may be found, and remove the same and sell the same, or any part thereof; or if the same shall not be sufficiently matured for harvesting or gathering, to cultivate the same, and to protect and preserve the same until it shall be fit, and then to harvest or gather and sell the same, or any part thereof, at private or public sale, and to apply the proceeds thereof to the payment of the expenses and costs of carrying out the provisions of this lease, and the payment of said rent hereby reserved.

**6th.** The party of the first part reserves the privilege of ploughing the stubble ground when the party of the second part may have secured the grain grown thereon; and further, that the party of the first part, or his legal representative, may enter upon said premises for the purpose of viewing, or of seeding, and of making repairs or any other purpose.

**7th.** If said party of the second part shall fail to cultivate said premises as herein agreed, or shall fail to keep any of the covenants in this lease contained, or shall assign this lease, or shall underlet said premises, or any part thereof, then this lease shall, at the election of the party of the first part, be null and void, and the party of the first part, or his legal representative, shall have the right to take possession of said premises, using such force as may be necessary, with or without process of law; and all damage growing out of a failure to perform any of the covenants of this lease shall be added to and become a part of the rent, recoverable as rent.

**8th.** The party of the second part hereby waives and relinquishes all right of exemption from sale or seizure under distress or execution, that he now has, or may hereafter have, by virtue of any law of this State, exempting personal property from seizure and sale on execution or distress for rent, and hereby gives the party of the first part full power, authority and right, to take and seize any personal property, whether exempt by law or not, and sell the same or any part thereof, in satisfaction of said rent hereby agreed to be paid.

**9th.** The party of the second part further agrees to pay and discharge all costs and attorney's fees and expenses that shall arise from enforcing any of the covenants of this lease by the party of the first part.

.....

IN WITNESS WHEREOF, We have hereunto set our hands and seals, the day and year first above written.

.....(Seal)
.....(Seal)
.....(Seal)
.....(Seal)

**Farm Lease—Crop Rent**

THIS AGREEMENT, made and entered into this .....day of..... .....A. D. 19...., by and between.....of the County of..... and State of ....., party of the first part, and ..... of the County of .....and State of ....., party of the second part.

WITNESSETH, that the said party of the second part, for and in consideration of the payments to be made by the said party of the first part to the said party of the second part, as hereinafter set forth, covenants and agrees to and with the said party of the first part, to furnish the seed, the labor, the implements, the horses, and all other things necessary, and to break up, plant and cultivate in .....corn during the season of the year 19...., the following described real estate, situated in the County of .....and State of ....., to-wit: (here give description) containing .....acres, more or less.

The said party of the second part covenants and agrees to break up said land properly, and to plant the same in corn, as early in the season of 19...., as the weather will permit; that he will cultivate said corn according to the rules of good husbandry, giving the same all necessary and proper cultivation with cultivators, plows, harrows, or other necessary implements; that he will, after the said corn has been laid by, go through the same, and pull or cut out all cockle burrs, button weeds, and all other noxious weeds; that he will also cut or pull out all such noxious weeds as may appear in ditches, turnrows, or around hedges, fences or elsewhere on said above described land, and that he will do this in time to prevent such weeds from going to seed; that he will also trim all hedges on said described land, and will rake and burn the brush therefrom, so doing at least once during said season, and before the .....day of..... ....., 19....

The said party of the second part further covenants and agrees to shuck clean of husks and silk, and to gather.....of the corn so raised on said described land, and to crib the same in cribs furnished by the said party of the first part, and located upon.....; that he will shuck, gather and crib the said corn as soon as the same is thoroughly dry and fit for cribbing, but not until the same is thoroughly dry. And the said party of the second part further covenants and agrees that if the said party of the first part shall desire to have the said..... .....of said corn, so described as aforesaid, shelled and delivered at .....(State), furnishing at his own expense the necessary vehicles, horses and labor therefor, and will deliver the same at the time required by the said party of the first part, the said party of the first part to pay for the shelling.

The said party of the first part, for and in consideration of the full and complete performance by the said party of the second part of all his covenants and agreements as hereinbefore set forth, covenants and agrees to pay to the said party of the second part, on or before the ..... day of ..... 19...., .....of all the corn so raised on said above described land, the same to be measured and ascertained as follows:

.....
.....

It is mutually agreed and understood by and between the said parties that if the said party of the second part fail faithfully to perform and keep any of his covenants and agreements hereinbefore set forth, at the time when the same are to be performed, the said party of the first part

may have the work or thing omitted to be done by the said party of the second part, done by competent persons, and shall charge the expense thereof to the said party of the second part, and shall retain from the .....of the corn raised on said premises, to be paid to said party of the second part, as aforesaid, sufficient corn at the current price per bushel, at the nearest elevator on the day of settlement, not later than February..... 19...., to reimburse said party of the first part for all moneys paid by him or expense incurred by him, in having said work done.

It is further mutually understood and agreed by and between the said parties that in the event of the death or other incapacity of the said party of the second part after having partially performed his covenants and agreements hereinbefore set forth, the said party of the first part shall arrange to have the undertakings of the said party of the second part fully performed by competent persons at as reasonable rates as may be obtained, and shall charge the expense thereof to the account of the said party of the second part, and shall retain the amount of the expense so incurred from the said.....of the corn, to be paid by the said party of the first part to the said party of the second part as above set forth.

It is expressly understood and agreed by and between the said parties that the said party of the second part shall have no estate of any kind in the said above described lands. As to any clover seed, sweet clover seed, soy beans or cow peas that the party of the first part elects shall be sown, said second party agrees to sow all above mentioned seeds at his own expense and to pay one-half the cost of said seeds, and if the clover, sweet clover, soy beans and cow peas are good enough to cut or harvest said first and second parties are to share equally in said crops, but the party of the second part is to do all work, to cut, harvest and thresh the same, and to pay one-half machine charges for threshing.

The said party of the second part, in consideration of the payment hereinafter set forth to be made by the said party of the first part to the said party of the second part, covenants, and agrees to furnish..... .....the seed, the labor, the implements, the horses, and all things necessary, and to prepare the land properly, and to sow the following described land, situated in the County of .....and State of ....., to-wit: (here describe land), in oats, as early in the season of 19....as the weather will permit; that he will give the land all necessary and proper cultivation; and that when the oats have matured he will cut and thresh the same, carefully stacking the straw, and that he will furnish the horses, the labor, the vehicles and all things necessary, and at his own expense will deliver....., (State) .....of the oats raised on said described land.

The said party of the first part, for the full and faithful performance by the said party of the second part of his covenants and agreements relative to raising oats, covenants and agrees to pay to the said party of the second part.....of the said crop of oats, and..... of the said straw.

It is understood and agreed by the said parties that the covenants and agreements of the said party of the second part hereinbefore made relative to the cutting and pulling of weeds, the trimming of hedges, burning of brush, default of said second party, death or incapacity of said second party, shall apply to and be binding upon said second party in this contract relative to the raising of oats, and the oats land, as well as to the raising of corn and the corn land.

.....

.....

It is also expressly understood and agreed by and between the said parties that the said party of the second part shall have no estate of any kind in the said above described lands, and that the stalk fields on said corn land, and the stubble on said oats.....land shall be and remain the property of the party of the first part

To enable the said party of the second part the more conveniently and easily to carry out his aforesaid contract, it is further mutually agreed between the parties hereto that the said party of the second part shall have the use of the dwelling house and out buildings situated on the .....and also the pasture land on the ..... containing in all an area mutually estimated at .....acres, from the first day of March, 19...., to the last day of February, A. D. 19...., and that as consideration therefor, said party of the second part hereby covenants and agrees to pay to the said part of the first part the sum of .....dollars, for which sum the said party of the second part has executed his note of even date herewith, payable to the said party of the first part on or before the .....day of .....A. D. 19...., with interest at.....per cent per annum from date until paid, and to secure the payment of which note the said party of the second part hereby authorizes the said part of the first part to retain from the wheat, oats or corn hereinbefore agreed to be paid to the said party of the second part a sufficient number of bushels at the current elevator price at the time of settlement to meet the payment of said note; said party of the second part further agrees not to underlet said last above described premises without the written consent of the party of the first part, and that on the .....day of February, A. D. 19...., he will yield up peaceable possession of the same without further notice.

It is also expressly stipulated and agreed by and between the said parties that all hedges on and around said dwelling house and out buildings and said pasture lands are to be trimmed, and noxious weeds destroyed as hereinbefore provided, with respect to the other lands hereinbefore mentioned.

IN WITNESS WHEREOF, the said parties have hereunto set their hands and seals to this and other instrument of like tenor and date on the day and year first above written.

.....(Seal)
.....(Seal)
.....(Seal)
.....(Seal)

**Farm Lease—Share Rent.**

THIS INDENTURE, made and entered into this.....day of ..... 19...., by and between .....party of the first part, lessor, and.....party of the second part, lessee, Witnesseth:

DESCRIPTION OF THE LAND. That the first party, in consideration of the agreements, and stipulations hereinafter mentioned, to be kept and performed by party of the second part, has leased and does by these presents rent and lease unto the second party the following described real estate, situated in the .....district, county of..... and the state of ....., to-wit: (Give exact location of the farm.) .....

LENGTH OF TENURE. To have and to hold the said premises unto said second party from the first day of ....., 19...., at 12 M., to the first day of ....., 19...., at 12 M., and from year to year thereafter, and unless and until either party hereto shall, on or before September first of the calendar year, give notice in writing to the other party of the purpose, desire and intention to terminate said lease on the first of March following, or unless this contract shall be earlier terminated under and pursuant to the provisions therefor herein contained.

PLAN OF FARMING BUSINESS. This leasing arrangement is known as a stockshare plan. The parties to this contract will co-operate fully according to the terms of this lease, in order that each may receive the largest returns consistent with a practical system of cropping and soil management, which shall maintain and even increase the fertility of the land, with the purpose that this farm shall not decrease in productiveness and value.

The type of farming agreed upon is livestock, dairying, potatoes, and .....production. The plan is to feed most of the crops grown on the farm, depending upon the sale of livestock, dairy products, potatoes and.....as the principal source of income. No hay, straw, corn stover, roughages or manure may be sold from the farm unless by written consent of party of the first part. (Outline of crop rotation.)
.....

There shall be sown by the lessee each year not less than..... acres to clover or alfalfa with not less than eight pounds of clover or alfalfa seed to the acre. There shall be on the farm at all times not less than.....acres of good hay seeding.

Lessee shall not sow more than.....acres of wheat or fall-sown grains during the fall previous to the termination of this lease or of this lease extended.

Livestock owned by outside parties shall not be pastured, stabled or boarded except by written consent of lessor.

WHAT LESSOR FURNISHES. The first party shall furnish the above farm, including the improvements thereon, and pay all taxes and insurance on said property. He shall furnish materials needed for improvements and repairs to real estate as needed, and shall furnish materials for new permanent fences and other permanent improvements as mutually agreed upon.

WHAT LESSEE FURNISHES. The second party shall furnish all work horses (not to exceed.....) to work the farm, shall furnish harnesses, implements, farm machinery, repairs on machinery and shoeing on horses, and labor necessary to do all work required to conduct properly this farming business as described in this agreement. He shall make all repairs and improvements where skilled labor is not required, except as herein specified. He shall haul from.....all feeds, fertilizers, building materials, tile, and all materials for repairing fences and buildings which may be needed in the operation of the said farm. He shall haul from .....and spread on the land limestone (ground or burned), phosphates, and other fertilizers purchased by lessor for use on said farm, and he shall apply same in such places and in such manner as lessor may direct. He shall haul or drive to market all produce from farm free to lessor. Lessee agrees to operate said farm in a workmanlike manner, and to do the necessary work in good season, and to care properly for the crops and livestock, preventing all unnecessary waste or loss or damage to lessor's property. He agrees to return all stock and personal property to lessor in as good condition as when received by him, ordinary aging and use and damage by fire, floods, wind or lightning excepted. He further agrees that he will not burn cornstalks, straw or other vegetable matter grown upon said farm, but will spread all this material upon the land as manure when not fit as feed for livestock.

WHAT LESSOR AND LESSEE SHALL FURNISH JOINTLY. Lessor and lessee shall furnish jointly all seed grain, grass seed, clover and alfalfa seed sown on said farm during the period of this lease; also all livestock other than work horses and.....cows hereinbefore mentioned; and feed, including hired pasture if such becomes necessary for the same, including lessee's horses. All livestock, including lessee's horses, are to be fed from undivided feed; it is understood, therefore, that lessee's horses while so fed shall be used only in the work of the farm. They shall furnish binder twine and all fuel for tank heater, threshing, corn shredding, silage cutting, clover hulling, and pay machine bills for the same. They shall pay jointly all veterinary fees and stallion service fees. Each party shall pay one-half of all taxes and insurance on all personal property owned in common; shall share equally in all proceeds from the sale of livestock, poultry, grain, and other produce raised on said farm. Butter used by either party shall not be obtained

from the said farm dairy. Each party shall gather and keep his own share of the fruit. Buying and selling of materials, livestock and other farm produce shall be left largely with the lessee, but all sales and purchases of more than five dollars ($5.00) shall be made with knowledge and consent of the lessor. All feeds on the said farm at the beginning of this lease shall be appraised by a committee of three, and one-half of the value of the same shall be paid to lessor by lessee, the committee to be made up of disinterested parties and appointed as follows: One man each by lessor and lessee and these to select a third one. All business in the way of payments and receipts shall be by checks and deposits through the Bank of.....

LESSEE'S SPECIAL PRIVILEGES. Lessee may have potatoes, garden truck, and such fruit as the farm affords, milk, poultry and eggs for family use only. Lessee shall not keep boarders other than those that are being employed for actual farm operations or employed in the making of improvements on the farm. Lessee is to have necessary fuel from fallen timber for house use, and if this be not sufficient lessor agrees that lessee may cut and use trees not fit for lumber that have been marked by lessor for cutting.

LESSOR'S SPECIAL PRIVILEGES. No timber shall be sold by party of the second part, nor shall the receipts from the sale of timber be shared by party of the second part. Lessor may sell or contract to sell timber from the farm without consent of lessee, and the receipts from the same are not to be governed by this contract. Right-of-way to timber shall be given by lessee to lessor, his assigns or representatives, for the removal of timber.

LIVESTOCK. Both lessor and lessee shall own in common, each an undivided one-half, all livestock, excepting as hereinbefore provided for, owned and produced upon said farm; and such of said stock as parties shall agree upon shall be sold at such time as may be satisfactory to both. All stock brought onto the farm that is to be owned jointly shall be appraised by a committee of three to be selected as follows: One man to be selected by each party and these to select a third one. Settlement for such livestock between lessor and lessee shall be made on the basis of such appraisal. Work horses owned by lessee shall be three years or more of age. Colts raised on the farm or brought onto the farm shall be owned in common, each an undivided one-half, until they are three years of age, at which time they shall be sold unless sold previous to that age. Lessee agrees that any or all of the .....cows furnished by lessor may be replaced at the discretion of lessor with young ones produced on said farm. The young cow is owned jointly until the cow she replaces is sold. The money received for the retired cow is to be divided equally between the parties. If none of the young cows reared on said farm suit lessor he may sell at any time any or all of the .....cows furnished or owned by him and receive all the receipts derived therefrom, in which case he must replace the aforesaid cow or cows within sixty days. It is also agreed to keep a registered bull of the.....breed at the head of the herd, to be purchased and owned jointly, said bull to be mutually satisfactory to both parties; to maintain not less than..... cows on said farm; and that the heifer calves from the best cows are to be raised each year so as to maintain or increase the size of the herd and improve its quality.

HOW MONEY IS TO BE DIVIDED OR INVESTED WHEN CROPS OR LIVESTOCK ARE SOLD. Whenever any cattle, hogs, or any other products of said farm shall be sold, the proceeds shall be equally divided between the parties, or if agreed upon it may again be invested in other stock, grain or material for the common use and benefit of the parties. Settlement for all receipts and expenses that have been received and paid during any calendar month shall be settled for between the parties at the end of that month. Drafts or checks for the share of the lessor, together with signed statements by purchasers of all products sold, where

a sale is in excess of two dollars, shall be rendered to the lessor. Receipts, also bills, for all purchases paid for by lessee during the calendar month shall accompany the statement of the month's settlement.

NOXIOUS WEEDS TO BE DESTROYED, AND WORKMANSHIP OF LESSEE. Lessee further covenants and agrees that he will farm said land in good farmlike and workmanlike manner; that he will not commit any waste or suffer injury to be done to the premises; that he will allow no noxious weeds to go to seed on said premises, and that he will keep the weeds and grass cut along the roadsides adjoining the farm.

MANURE. Lessee also agrees that he will draw out and scatter on said premises daily, or as frequently as weather and ordinary farm conditions will permit, all manure; that he will scatter it where most needed; and that the yards shall be cleaned up on or before December first of each year of all manure, and that in default of so drawing out and scattering of manure, he shall pay to lessor as penalty the sum of fifty dollars ($50.)

CARE OF THE PREMISES. Lessee agrees that he will keep the buildings, fences, and other improvements on said premises in as good repair and condition as the same are in when he goes into possession or as good as they may be put in during said lease, loss by fire, or inevitable accident and ordinary wear excepted; that he will not assign this lease or sub-let any part of said premises without the written consent of lessor; that he will not bring mortgaged property upon said premises without consent of said lessor; that he will not sell or remove any of the farm crops from said premises without the consent of the lessor; that he will not undertake any operation that will injure said land.

SURRENDER OF POSSESSION. That in case lessee shall, from any cause, neglect, refuse or be unable to properly prepare said land, sow, plant, harvest, or care for any and all crops to be raised on said land, said lessor, his agents, heirs, or assigns, may at their option, upon twenty-four (24) hours' notice to lessee, enter upon said premises and take possession thereof, and of the crops growing or being grown thereon, and properly care for the same, and sell the same, and the proceeds remaining after the payment of the rents, cost and expense and damages, shall go to the lessee; that he will surrender the stubble land, for the purpose of plowing, in the fall preceding the termination of this lease, as soon as the crop has been removed from the same; that he will surrender possession of said premises at the end of the term, or sooner termination thereof; and if immediate possession be not given that he will pay lessor or assigns the sum of ten dollars ($10.00) for each and every day possession is thus withheld as damages for nonsurrender.

LIEN ON PROPERTY OF LESSEE. That a failure to keep and perform any of the agreements hereinbefore mentioned shall, at the option of said lessor or assigns, operate as a forfeiture of this lease, and terminate the term, and said lessor may take possession of the premises at once, without process of law; or he may bring an action at law for possession, said lessee being, from the date of such forfeiture, a tenant holding over after the expiration of his term, and his continued occupancy of said premises thereafter shall be alone a tenancy at the will of the lessor and not otherwise; that in consideration of this lease, and the agreements herein contained on the part of the lessor, said lessee covenants and agrees to keep and perform the agreements hereinbefore set forth, hereby covenanting that moneys due from him to said lessor for plowing, or damages, or otherwise, shall be and hereby are declared and made a perpetual lien on any and all crops, stock and other personal property of the lessee at any time kept, had, or used on said premises, whether the same are exempt from execution or not, such lien to attach from the commencement of this lease.

LESSOR'S RIGHT OF ENTRY. Said lessor reserves the right of himself, his employes or assigns to enter upon said premises at any time, for the purpose of viewing the same or making repairs or improvements thereon, the same not to interfere with the occupancy of the lessee, and

reserves the right of himself or agent to enter upon said premises for the purpose of plowing in the fall preceding the termination of this lease.

HOW DIVISION SHALL BE MADE AT END OF TERM. At the end of the term of this lease an accounting shall be had between the respective parties hereto, and each kind of produce, stock, etc., upon said farm belonging jointly to lessor and lessee, shall be equally divided by lessee into two equal shares, as near as may be, the lessor to take his choice, and such choice to be final. And if proper settlement cannot be made in that way, all the parties hereto agree to have a public sale upon the premises for the purpose of effecting such settlement. Since silage is an article that is not salable to outside parties, lessor agrees that he will pay to lessee at the terminaion of this lease, for lessee's share of the silage at the rate of three dollars per ton.

CONCERNING VERBAL AGREEMENTS. Verbal statements and agreements are not valid if contrary to this contract, and are never valid unless reduced to written form and signed by the party or parties making them.

LIABILITY OF EACH PARTY. Neither party shall have the right to bind the other party by any contract outside the scope of this agreement, or by any purchases made within the scope of this agreement, except with the consent of the other, unless hereinbefore provided for. Nor shall either party hereto have any authority, right or power to create any debt or obligation in the name or resting upon the other; and under no condition or circumstance shall the relation created by this instrument constitute or be interpreted as constituting a partnership, or other than that of lessor and lessee.

Signature blanks and notary's blank follow here.

### Landlord's Five Day Notice.

To John Doe:

YOU ARE HEREBY NOTIFIED that there is now due me the sum of .....Dollars and.....Cents, being rent for the premises situated in the City of Chicago, in Cook County, in the State of Illinois, and known and described as follows, viz: Lot one (1) in Block two (2) of the Original Town of Chicago.

And you are further notified that payment of said sum, so due, has been demanded of you, and that unless payment thereof is made on or before the 21st day of July, A. D. 19...., your lease of said premises will be terminated. Richard Roe is hereby authorized to receive said rent so due, for me.

Dated this 15th day of July, 19....,

JAMES SMITH,
Landlord.

### Ten Days' Notice to Quit.

To John Doe:—You are hereby notified that in consequence of your default in payment of rent and also to keep the buildings and fences on the premises hereinafter described in proper repair, being Lot One in Block Ten of the original town of Aurora, Kane County, Illinois, I have elected to terminate your lease, and you are hereby notified to quit and deliver up possession of the said premises to me within ten days of this date.

Dated this 21st day of July, 19....

(Signed) RICHARD ROE,
Landlord.

### Assignment of Lease.

For and in consideration of the sum of $....., to me in hand paid by....., I hereby assign and transfer to said .....a certain lease, bearing date....., 19...., and made by.....to me, ....., for (describe the premises), together with all and singular the buildings and appurtenances thereunto belonging, or in any wise appertaining, subject, however, to the rents hereafter to accrue and the covenants and conditions contained in said lease.

(SIGNATURE.)

**Extension of Lease**

This agreement, made this.....day of..... 19.., between ..... of ....., lessor and ..... of ....., lessee, witnessets:

Whereas, the tenacy entered into by virtue of the within written agreements will expire on the.....day of.....19...

And whereas, the parties thereto have agreed to continue said tenancy for the further term of.....years from said da e.

Now, therefore, in consideration of their mutual promises, the said ..... and ..... hereby agree to continue the relationship of landlord and tenant for a further term of.....years, upon the same terms and conditions, and upon the same provisions and agreements, as are expressed and contained in the within instrument, and relating to the tenancy thereby created. All such terms, conditions, provisions, and agreements shall remain in full force and take effect in like manner as if said relation of landlord and tenant had been originally entered into for a full term of... years, instead of said term of.....years.

In witness whereof the said parties have hereunto set their hands and seals the day and year first above written.

.....(Seal)

.....(Seal)

Note:—This form is to be attached to original lease.

## LEGAL REMEDIES

1. **Definition.**—As we have already seen, a **remedy** is a legal means employed to enforce a right or redress an injury. For example, suppose A contracts to tile out a low spot in B's land, and then refuses to live up to his contract. In a court of law B can sue A for the damages he sustained through A's failure to drain the land, and this would be a **legal remedy.** In a court of equity B could compel A to put in the tile and that would be an equitable remedy.

2. **Steps Necessary to Secure a Legal Remedy.**—When one party of a contract has grounds for an action against the other, he brings suit in the civil courts as follows:

1. B, through his attorney, files a complaint against A, stating the agreement and giving the facts of A's failure to fulfill his contract, and the loss resulting to B from such violation of contract.
2. A is summoned to appear in court to answer the charge and the court is asked to render judgment against A for the damage resulting from A's failure or refusal to drain the land, and also for the costs.
3. The case is then tried, and if judgment is rendered against A, the court empowers the sheriff to levy

on any property A may have above exemption, sell the same and turn the proceeds over to B for the damages awarded, returning any surplus to A.

3. **Various Kinds of Actions.**—There are many different civil actions. The more common are thus defined:

(a) **Assumpsit** is the action used for the breaking of a parole (unwritten) contract as distinguished from a written contract.

(b) **Complaint** is the general name used in some States for any legal action.

(c) **Covenant** is the action used to secure a legal remedy for the breaking of a contract under seal.

(d) **Ejectment** is a form of action to determine the title to land and right of possession.

(e) **Habeas Corpus,** is an action or writ used to recover a person's liberty from illegal restraint.

(f) **Libel,** an action for libel is brought to collect damages for any malicious writing, tending either to blacken the memory of one dead, or injure the business or reputation of one alive.

(g) **Mandamus** is an action to compel someone to do some specific thing, pertaining to his office or duty.

(h) **Quo warranto** is a writ used to recover an office or a franchise from the person or corporation in possession of it.

(i) **Replevin** is a form of action for the recovery of the possession of specific personal property.

(j) **Slander,** an action to collect damages for the malicious defamation of a man by word of mouth.

(k) **Tort,** an action in tort is used to recover damages for a private or civil wrong or injury arising independent of any contract.

(l) **Trespass on the case** is an action to recover damages for an indirect injury.

(m) **Trover,** an action to recover damages from one who has, without right, converted to his own use the goods of another.

## MORTGAGE

**1. Definitions.**—A mortgage is a conveyance of property either real or personal, given to secure the payment of a debt. When the debt is paid the mortgage becomes void. The person who mortgages his property is called the **mortgagor.** The person to whom the mortgage is given is the **mortgagee.**

**Requirements.**—All real estate mortgages must be in writing, under seal. The instrument must clearly state the amount of the debt and the due date. The property must be clearly described. The mortgage must then be acknowledged before the proper public official and properly recorded in the county records. The mortgagor usually gives a bond or note as evidence of the indebtedness, stating on its face that it is secured by a mortgage of same date.

**2. Possession of the Property** usually remains with the mortgagor and does not pass to the mortgagee unless the debt is not paid when due. He receives all rents and profits from the property, and pays all taxes and other expenses.

**3. Improvements to the Property.**—If a mortgagor erects buildings on mortgaged land and the mortgage is foreclosed, the mortgagee in taking possession gets all these additions. If the mortgagee erects buildings and the mortgagor thereafter redeems his land, he gets the buildings without paying for them.

**4. Assignment.**—A mortgagee can transfer, sell, or assign his mortgage at any time regardless of the wishes of the mortgagor. On the other hand, if the mortgagor wishes to sell his real estate he must sell subject to the mortgage. In other words, he can do nothing to invalidate the mortgagee's security.

**5. Insurance.**—The property may be insured by both parties. In case of loss by fire the holder of the mortgage can collect the insurance which he had on the property and can also proceed to collect the debt from the mortgagor. However, if he insured the property at the expense of the mortgagor, he would have to turn the proceeds over to the mortgagor.

**6. Foreclosure.**—A foreclosure is a legal proceeding to sell the property mortgaged to satisfy the debt. The mortgagor cannot buy the property unless he is authorized to do

so either by statute or by the mortgage itself. On the other hand, if the property is sold by the sheriff, the mortgagor has a right to purchase it. The following steps are necessary for a foreclosure:

(a) Application to a court.
(b) A hearing by the court.
(c) Referring to a master in chancery or a referee.
(d) Advertising the property.
(e) Public sale to the highest bidder.
(f) Deeding the property to the purchaser.
(g) Paying the money due to the mortgagee.
(h) Returning any surplus to the mortgagor.

A mortgage may be made with full power of sale so that if the mortgage note is not paid, the holder can give a purchaser a good title without process of law. In most cases, however, the courts give the mortgagor a period of several weeks or months to pay, and if he fails to do so, the land is sold by an officer of the court.

7. **Redemption.**—Formerly, a mortgagor could redeem his land only before or when the debt became due, but further time is now given. This right to redeem is called a right in equity to redeem or an equity of redemption. The time to redeem varies in different States but is usually three years. This right to redeem is considered of so much importance that no party is permitted to lose it even by his own agreement. Even though the mortgagor agrees in the most positive terms to forfeit his equity of redemption, the law sets aside such agreement and gives the debtor full time to redeem his property. The only way to set aside this time to redeem is to give the mortgagee permission or authority to sell the property and thus to secure himself.

8. **General Principles:—**

a. A mortgage may be made to cover future advances.
b. As the county records are public and may be examined by anyone, the injured party alone is responsible if he buys or loans money on a piece of property without first making certain that there were no encumberances on it.
c. The law assumes that the mortgage contract covers all the agreements concerning the payment of the debt and the return of the property. The

courts, therefore, ignore any other agreements which may have been made at the same time. Later agreements, however, will hold.

d. One who sells real estate may have a lien on the property to secure future payments, which amounts to the same thing as a mortgage. Third parties must have notice of such a lien.

e. Several mortgages may be made on the same piece of real estate. The one recorded first has the first lien, etc.

f. A creditor cannot compel payment of the mortgage before it is due. Neither can the debtor compel the creditor to accept the payment before it is due.

g. If after a foreclosure, there is any deficit due the mortgagee, the mortgagor is still liable. (See chattel mortgage.)

h. A trust deed serves the same purpose as a real estate mortgage but renders the note negotiable.

## Mortgage Forms

### Mortgage to Secure a Debt, With Power of Sale.

This Indenture, made the.....day of.....in the year one thousand nine hundred and....., between (name, residence and occupation of mortgagor) party of the first part, and (name, residence and occupation of mortgagee) party of the second part, Witnesseth, that the said party of the first part, in consideration of the sum of (the amount of the debt) to him duly paid before the delivery thereof, has bargained and sold, and by these presents does grant and convey to the said party of the second part, and his heirs and assigns forever, all (here describe the premises) with the appurtenances, and all the estate, right, title, and interest of the said party of the first part therein.

This grant is intended as a security for the payment of (here describe the debt), which payments, if duly made, will render this conveyance void. And if default shall be made in the payment of the principal or interest above mentioned, then the said party of the second part, or his executors, administrators, or assigns, are hereby authorized to sell the premises above granted, or so much thereof as will be necessary to satisfy the amount then due, with the cost and expenses allowed by law.

In witness whereof, the said party of the first part has hereunto set his hand and seal the day and year first above written.

Sealed and Delivered in
the Presence of
.....

(Seal)

### Assignment of Mortgage

KNOW ALL MEN BY THESE PRESENTS, That I, Henry Betzoid, the within named Mortgagee for a consideration of eight hundred dollars ($800.00), hereby assign, transfer, and set over unto E. B. Newman, his heirs and assigns, the within named instrument of mortgage, and all the real estate, with appurtenances therein mentioned and described, to have

and to hold the same forever. Subject nevertheless to the equity and right of redemption of the within named A. Meyer, his heirs and assigns therein.

In witness whereof the party of the first part has hereunto set his hand and seal this third day of March, in the year of our Lord nineteen hundred and.....

Sealed and Deivered in
the Presence of
E. E. Hawthorn.

HENRY BETZOID. (Seal)

**Form of Release.**

KNOW ALL MEN BY THESE PRESENTS, That I, James Y. Scammon, of the County of Cook, and State of Illinois, for and in consideration of one dollar, to me in hand paid, and for other good and valuable considerations, the receipt whereof is hereby confessed, do hereby grant, bargain, remise, convey, release and quitclaim unto Samuel P. Smith and Sarah E. Smith, of the County of Du Page and State of Illinois, all the right, title, interest, claim or demand whatsoever I may have acquired in, through or by a certain indenture or mortgage deed, bearing date the first day of January, A. D., 19...., and recorded in the Recorder's office of Du Page County, Illinois, in book 25 of mortgages, page 100, to the premises therein described, and which said deed was made to secure two certain promissory notes, bearing even date with said deed, for the sum of twenty-five hundred dollars.

Witness my hand and seal this 28th day of February, A. D. 19....

JAMES Y. SCAMMON. (Seal)

A TRUST DEED is a deed to a piece of real estate held by a third party in trust as security for a note. This deed is very extensively used because it takes the place of a mortgage deed and renders the note negotiable.

**Form of Trust Deed.**

THIS INDENTURE, Witnesseth, That the Grantor,..... of the.....in the County of.....and State of..... for and in consideration of the sum of.....Dollars, in hand paid, CONVEY.....AND WARRANT.....to.....of the .....County of .....and State of.....the following described Real Estate, to-wit: (Here Describe) situated in the County of.....in the State of Illinois, hereby releasing and waiving all rights under and by virtue of the Homestead Exemption Laws of the State of....., and all right to retain possession of said premises after default in payment or a breach of any of the covenants or agreements herein contained, in trust, nevertheless, for the following purposes:

WHEREAS, The said.....Grantor.....herein..... justly indebted upon.....Promissory Note.....bearing even date herewith, payable to the order of.....
.....
.....

NOW, If default be made in the payment of the said..... Promissory Note.....or of any part thereof, or the interest thereon, or any part thereof, at the time and in the manner above specified for the payment thereof, or in case of waste or non-payment of taxes or assessments on said premises, or of a breach of any of the covenants or agreements herein contained, then and in such case the whole of said principal sum and interest, secured by the said.....Promissory Note....., shall thereupon at the option of the legal holder or holders thereof, become immediately due and payable; and on the application of the legal holder of said Promissory Note....., or either of them, it shall be lawful for the said Grantee, or his successor in trust, to enter into and upon and take possession of the premises hereby granted, or any part thereof,

and to collect and receive all rents, issues and profits thereof; and in his own name, or otherwise, to file a bill or bills in any court having jurisdiction thereof against the said party of the first part,..... heirs, executors, administrators, and assigns, to obtain a decree for the sale and conveyance of the whole or any part of said premises for the purpose herein specified, by said party of the second part, as such trustee or as special commissioner, or otherwise, under order of court, and out of the proceeds of any such sale to first pay the costs of such suit, all costs of advertising sale and conveyance, including the reasonable fees and commissions of said party of the second part, or person who may be appointed to execute this trust, and.....Dollars attorney's and solicitor's fees, and also all other expenses of this trust, including all moneys advanced for insurance, taxes and other liens or assessments, with interest thereon at 7 per cent per annum, then to pay the principal sum of said note....., whether due and payable by the terms thereof or the option of the legal holder thereof, and all interest due thereon, rendering the overplus, if any, unto the said party of the first part,..... legal representatives or assigns, on reasonable request, and it shall not be the duty of the purchaser to see to the application of the purchase money.

WHEN The said note.....and all expenses accruing under this Trust Deed shall be fully paid, the said Grantee or his successor or legal representatives shall re-convey all of said premises remaining unsold to the said Grantor.....or.....heirs or assigns, upon receiving his reasonable charges therefor. In case of the death, resignation, absence, removal from said.....County, or other inability to act of said Grantee.....then.....of said..... is hereby appointed and made successor in trust herein, with like power and authority, as is hereby vested in said Grantee. It is agreed that said Grantor.....shall pay all costs and attorney's fees incurred or paid by said Grantee or the holder or holders of said note.....in any suit in which either of them shall be plaintiff or defendant, by reason of being a party to this Trust Deed, or a holder of said note....., and that the same shall be a lien on said premises, and shall be included in any decree ordering the sale of said premises and taken out of the proceeds of any sale thereof.

WITNESS, The hand.....and seal.....of said Grantor.....this .....day of.....A. D. 19....

.....(Seal)

.....(Seal)

## MUNICIPAL CORPORATIONS

1. **Definition.**—A municipal corporation is a corporation formed to carry on the work of government in a town or city. Its charter is granted by the State and adopted by the citizens.

2. **Powers.**—A city government has the power

a. to make its own laws,
b. to enforce its laws,
c. to control all matters and things within its corporate limits,
d. to levy taxes,
e. to issue bonds,
f. to exact fines and forfeitures.

In other words, a municipal corporation is a branch of, and has all the duties, functions and powers of the Federal Government insofar as it does not conflict with the laws of the State and Federal Government.

3. **Officers of a Municipal Corporation.**—The mayor is the chief executive, the Board of Alderman the law making body, of a municipality. Under the commission form of government the above offices are held by a commission of three or five men, who have complete charge of the business of city government. The judicial power is vested in the police magistrate's court, or in larger cities in the municipal court.

4. **Wrongful Acts of Officers.** The city is not responsible in damage for injuries to persons or property caused in the execution of a government duty. Neither is it liable for false arrest, false imprisonment or assaults of police officers. If any wrongful act is committed by an officer while acting in his official capacity, he is liable personally.

5. **The City's Duty.**—It is the duty of the city government to provide and maintain safe and passable streets and highways, maintain police and fire protection, and provide for the general safety and comfort of its citizens.

6. **Liability.**—If, therefore, the city fails to maintain safe and passable streets, the city is liable for damages resulting to those rightfully upon the streets. On the other hand, there seems to be some difficulty in establishing just what is meant by proper police and fire protection. The high rates on burglar and fire insurance policies indicate

that the damages to be collected from the city on the ground of inadequate protection might just as well be ignored. The risks are all included in your policy.

7. **Police Power of Cities.**—The police power of a city extends to the city limits and a reasonable distance beyond. The police magistrate, sometimes called the recorder, sits in a court having jurisdiction equal to that of a justice of the peace. The police magistrate, and the police officers are bound to enforce the laws of the city, called ordinances. An officer may arrest persons:—

a. When a wrongful act is committed in his presence.
b. Upon a valid warrant.
c. Upon suspicion, when well grounded and in good faith.

8. **Schools.**—The schools of a city are controlled by the Board of Education. This Board has absolute control and supervision over teachers, students and buildings.

9. **Public Service Corporations.**—Any corporation furnishing the public as a whole, a service, or commodity, is called a public service corporation. Its activities are as a rule controlled and supervised by a public service commission, having the power to sit as a court, fix prices, render judgments, and regulate the activities of the corporations.

## NOTARIES PUBLIC

**1. The Office and Its Functions.**—The office of Notary Public as it exists in the several states today is the outgrowth of various designations traceable to the Roman Empire. Anciently merely a scribe, the power and duties of the Notary have been amplified by legislative enactments to meet the needs of changing conditions and a growing civilization until today he is recognized as an important and necessary public official and to whose acts are attached great credit and grave consequences, both to himself and the public he serves. His commission is granted upon the precedent representation of his capacity and integrity. In accepting the office the Notary contracts the obligation to fill it intelligently and honestly. The personal liability, civil and criminal, which the law ultimately places upon him for his mistakes and malfeasance, furnishes the person and protective necessity for an intelligent appreciation of the existing law appertaining to the duties of his office.

**2. Definition.**—A Notary Public is a state officer whose function is to attest and certify, by his hand and official seal, various instruments, in order to give them authenticity in other jurisdictions, to take acknowledgments of deeds and other conveyances and instruments, and to certify the same; and to perform other official acts, the power to do which is conferred by statutory enactment.

**3. Classification of Functions.**—As a general rule the functions of a Notary are ministerial, not judicial. They are confined to the civil, as distinguished from the criminal branch of the law, and consist for the most part in protesting inland and foreign bills of exchange and promissory notes, authenticating their dishonor by the refusal of the drawee or payee to accept or pay them on presentation or when due; the authentication of transfers or conveyances of property, and other documents required by the law to be authenticated; administering oaths and affirmations as to correctness of accounts, of corporate and personal reports to state and federal authorities for purposes of taxation and supervisions, to judges of election in corporate meetings, to appraisers and to qualify viewers to assess damages for the laying out of a street; the taking of depositions under the rules and instructions of the courts wherein the actions are pending; and the taking of affidavits as to the truth of averments made in

legal papers for use in proceedings before courts of civil and maritime jurisdiction.

**4. Definition of Functions.**—The term **"protest"** as applied to commercial paper means the taking of such steps as are required to charge or fix liability upon one secondarily liable, such as an Endorser. As applied to the Notarial act it means a declaration made in writing by a Notary Public after doing the acts certified, that the bill or note to which it relates was, on the day it became due, presented for payment, and that payment was refused. To **"authenticate"** a document means for a Notary to certify under his hand and seal of office with a notice of the date and in most states the expiration of his commission, such facts as the law requires to give the document operative effect. A **"deposition"** is the testimony of a witness taken down in writing, under oath or affirmation before a Notary Public, and usually subscribed by the witness, pursuant to special authority granted by a court after notice to the adverse party. It is authenticated by the Notary. An **"affidavit"** is a voluntary ex parte statement, formally reduced to writing and sworn to or affirmed and subscribed before a Notary Public. An **"acknowledgment"** is an oral declaration or admission made by one who has executed a document made before a Notary Public or other officer authorized by law to take acknowledgments, to the effect that the execution is his act and deed. The written certificate endorsed on the document by the officer taking the acknowledgment, certifying to the facts of the same, is sometimes referred to as "an acknowledgment." The function of an acknowledgment is two-fold—to authorize the document to be given in evidence without further proof of its execution, and to entitle it to be recorded. A Notary's **certificate of acknowledgment** is not part of its execution, but only evidence of it. At least six essential facts must appear in a certificate of acknowledge: (1), the designation of the officer making the certificate; (2), the name of the person making the acknowledgment, and that he or she personally appeared before the officer; (3), that there was an acknowledgment; (4), that the person who make the acknowledgment was identified as the one who executed the instrument; (5), such identity was personally known or proved to the officer taking the acknowledgent; (6), the day and year when the same was made. An **"oath"** is an outward pledge, given by the person taking it,

that his attestation or promise is made under an immediate sense of his responsibility to God.

**5. Form and Manner of Administering Oaths, Affidavits and Affirmations.**—The customary and approved manner of administering an oath or taking an affidavit is to have the person making the same place his hand upon an open copy of the Holy Bible and expressly assent to the oath which the Notary administers as follows: "You do swear that," etc., "So help you God." A less usual form is for the deponent to hold the Holy Bible in his hand and kiss the book after the words above quoted are recited. Another form is by the deponent lifting up his right hand and assenting to the following, which the officer repeats to him, "You do swear by Almighty God, the Searcher of all hearts," etc., "and that as you shall answer to God at the last great day," etc.

Any person who desires may in lieu of an oath or affidavit administered as outlined above, take and subscribe or assent to an affirmation, which is administered by the officer repeating the words, "You do solemnly, sincerely and truly declare and affirm that," etc., "and so you do affirm," or "are you content?" It is not unusual to ask the question, "Do you swear or affirm" rather than to wait for the deponent to express his desire.

The oath may however be varried in any other form in order to conform to the religious opinions of the person who takes it. A Jew must be sworn on the Old Testament, and with his hat on. A Mohammedan must be sworn on the Koran.

The importance of a strict and solemn compliance with these forms is respectfully urged. The average layman is inclined to attach only such importance and solemnity to these acts as the officer administering them shows. To perform these acts in a perfunctory manner is to deprive them of their intended value, and in some instances to encourage perjury.

**6. Form of Affidavit or Affirmation.**—

State of Pennsylvania, }
} S.S.
County of Philadelphia }

Allen B. White, being duly sworn (or affirmed), according to law, deposed and says (or in case of affirmation, in lieu of "deposes and says" insert "affirms and declares") that he is the person who executed the foregoing instrument (or if by an officer or agent of a corporation, insert in lieu of "he is

the person," etc., the following: "he is the [name of office] of the [name of corporation] above named, that he has authority from it to make this affidavit [or affirmation] in its behalf); and that the facts therein set forth are true to the best of his (add "and its" where made by officer or agent for corporation) knowledge, information and belief.

Sworn (or affirmed) and subscribed before me this 22nd day of November, A.D. 1923.

Allen B. White.

(Seal) C. D. Black

Stamp com. expires.

**7. Form of Acknowledgment Recommended by American Bar Association—By Single Person or by Husband and Wife:**

STATE OF .....
} S.S.
COUNTY OF .....

On this ..... day of ....., 19....., before me, the subscriber (here insert title of officer), personally appeared A.B. (and C.B., his wife, if so), to me known to be the person (or persons) described in and who executed the foregoing instrument, and acknowledged that he (she or they) executed the same as his (her or their) free act and deed.

(Seal) (Signature and title) etc.

## PARENT AND CHILD

**1. Necessity for the Law.**—If the marriage and family relations were what they should be, then the legal relation of parent and child would not be so important. The conditions of society, however, are such that in almost every community it is essential that the legal relations of parents and children be clearly and definitely understood.

**2. Ancient Authority.**—In the past ages the father was by custom considered an absolute monarch of the home. In the oriental countries of today the same custom still prevails; modern progress and modern ideas, however, have changed old customs, and the authority of the parent in civilized countries has been considerably limited by law.

**3. Rights of Parents.**—The parent has control of his minor child, and has all reasonable authority to enforce obedience. As long as the parent treats his child properly,

no one has a right to interfere with his authority, or take the child away and retain him against the wishes of the parent.

4. **A Runaway Child.**—A child has no right to leave home without permission of the parent, and should a child run away he can be brought back by force. If relatives or other parties keep him and refuse to give him up, the parent by legal process can obtain possession of his child, unless it can be shown that the father is brutal, or is not capable, on account of drunkenness or other causes, to take proper care of his child.

5. **Punishment of Children.**—A parent has a right to punish his minor child, providing he is not guilty of cruelty. Brutality is a crime, punished by severe legal penalties. The parent must be reasonable in his punishment, leave no bruises or in any way injure the health of the child.

6. **Rights to Earnings.**—A parent is entitled to all the earnings of his minor child. If the child should refuse to turn over his earnings to the parent, the employer of the child may be notified, and be compelled to pay the parent only.

7. **Special Rights.**—The parent may, however, make free his child from all obligations to himself and allow the child to collect his own wages and do for himself. When a parent thus makes public such a declaration, he cannot thereafter collect the child's wages.

8. **The Property of the Child.**—A parent may control the earnings of the child, yet he has no control of the property belonging to the child, either acquired by gift, legacy or any other way. If a parent, should appropriate his child's property, it would be just as criminal in the eyes of the law as stealing any one else's property.

9. **Parent's Obligation to Support.**—Parents are legally held for the support of their minor children. If a child has property, it does not relieve the parent from the support of his child; he, however, can apply to court and get permission to use a part, or all, of the income of the property for the child's support.

10. **Illegitimate Children.**—It is a parent's duty to support even an illegitimate child. Such a child has legally no father, but his putative father, as he is called, may be compelled by the overseers of the poor to furnish the child with reasonable support, so that it shall not become a "bur-

den on the parish." All children born in wedlock are legitimate, unless it is proved that the husband could not possibly be the father. The adultery of the wife cannot affect the legitimacy of the child. He is conclusively presumed to be the child of the husband. It makes no difference how soon after marriage the child is born. A child born the same day as the marriage, if subsequent to the ceremony, is legitimate, provided there is good reason for believing that the husband is the father.

11. **Effect of Illegitimacy.**—The only legal effect of illegitimacy of any consequence is that the child cannot inherit property from his father. He may, of course, take a legacy given to him by his putative father's will, but if there is no will he cannot inherit. An illegitimate child inherits from his mother even though there are legitimate children.

12. **Children's Obligations.**—Where the parents are unable to support themselves, the child is legally held for their support and care, but it must be first shown that the parent, or parents, are unable to support themselves.

13. **Crimes.**—A parent cannot be held for crimes committed by his minor child. If a child commits a premeditated crime, he is personally liable.

14. **Guardian.**—If a child has no parents living, a guardian may be appointed, or if he has arrived at a certain age, varying in different States, he may appoint his own guardian, who will in a legal sense exercise the prerogative of a parent.

15. **Contracts With a Minor.**—A contract made by a minor is valid if it is for necessities. Just what constitutes a necessity depends on the circumstances and is a matter for the jury to decide. If a minor contracts for other things, the contract is not always void, but may be avoided. If a minor fraudulently represents himself to be of age and makes a contract for goods, the seller cannot recover on the contract. His only remedy is an action of deceit. A minor who has a parent or guardian cannot make a contract even for necessities. If the parent or guardian is unwilling to provide the necessities he can be compelled to do so by the courts.

## PARLIAMENTARY LAW

**1. Parliamentary Rules.**—In every community it is necessary to hold public meetings from time to time, and in order to expedite the proceedings of such meetings, as well as to settle matters of dispute, it is necessary that rules of proceedings be adopted. In order to be able to take an intelligent interest and part in such meeting, it is essential that young and old be informed on the most important points of parliamentary rules.

**2. Women.**—This does not include men only, for we are living in a time when women are called upon to carry on a public meeting as well as men. Then, again, women are taking a much more active part in public affairs than formerly.

**3. Rules of Parliamentary Law.**—The following rules and suggestions will be found helpful in conducting public meetings:

a. The chairman selected should be a man of maturity and one held in respect and confidence.
b. To address the meeting permission must be obtained from the chairman by rising and saying: "Mr. President" or "Mr. Chairman."
c. No speaker should be interrupted unless his remarks are out of order, when he should be called to order by the chair. If the chairman fails to call him to order any member may do so.
d. The proper way to make a motion is to say: "Mr. Chairman, I move that (here state motion)."
e. When a motion is presented to the meeting and seconded, it should be stated or read by the secretary or chairman, and remarks called for.
f. After debate, the motion should be put to the meeting, the chairman announcing the result.
g. A speaker is "out of order" when he is speaking of matters and things foreign to the issue before the house.
h. Any violation of rules must be recognized and checked by the presiding officer, or demoralization must result.
i. When a member is called to order by the president, he should take his seat, unless he is permitted to explain.

j. If any ruling of the chairman is unfair it may be appealed by a vote of the house.

k. It is the privilege of any member to call for the yeas and nays and thus put on record the vote of every member.

l. The chairman is the servant, not the master of the house. To get rid of an undesirable chairman, the house may refuse to do any business, or may adjourn.

m. A motion to adjourn is always in order and is not debatable.

**4. Over Three Hundred Points of Order.**—Trace up each reference at the right, and then look up the corresponding numbers below, which will give the full information desired.

| | |
|---|---|
| Forms in which questions may be put | 28 29, 30, 31, 32 |
| Questions of precedence of questions | 19, 20, 21, 22, 23, 24, 25 |
| Motion to withdraw a motion | 1, 5, 7, 9, 13, 14, 16 |
| To take up a question out of its proper order | 1, 5, 7, 9, 12, 14, 16 |
| Motion to take from the table | 1, 5, 7, 11, 12, 14, 16 |
| Motion to suspend the rules | 3, 5, 8, 10, 13, 14, 16 |
| To substitute in the nature of an amendment | 3, 5, 8, 9, 13, 14, 16 |
| Motion to make subject a special order | 3, 5, 8, 9, 12, 14, 16 |
| Question whether subject shall be discussed | 1, 5, 7, 9, 12, 15, 17 |
| Motion that committee do not rise | 1, 5, 7, 10, 13, 14, 16 |
| Motion to refer a question | 3, 6, 8, 10, 13, 14, 16 |
| Motion to reconsider an undebatable question | 1, 5, 7, 10, 13, 14, 18 |
| Motion to reconsider a debatable question | 3, 6, 7, 10, 13, 14, 16 |
| Reading papers | 1, 5, 7, 9, 13, 14, 16 |
| Questions of privilege | 3, 5, 8, 9, 13, 14, 16 |
| Questions touching priority of business | 1, 5, 8, 9, 13, 14, 16 |
| Motion for previous question | 1, 5, 7, 9, 13, 14, 16 |
| Motion to postpone indefinitely | 3, 6, 7, 9, 13, 14, 16 |
| Motion to postpone to a definite time | 4, 5, 8, 9, 13, 14, 16 |
| Motion for the orders of the day | 1, 5, 7, 9, 13, 15, 17 |
| Objection to consideration of question | 1, 5, 7, 9, 12, 15, 17 |
| Motion to limit debate on question | 1, 5, 8, 9, 12, 14, 16 |
| Motion to lay on the table | 1, 5, 7, 11, 13, 14, 16 |
| Leave to continue speaking after indecorum | 1, 5, 7, 9, 13, 14, 16 |
| Motion to extend limits of debate on question | 1, 5, 8, 9, 13, 14, 16 |
| Motion to commit | 3, 6, 8, 9, 13, 14, 16 |
| Motion to close debate on question | 1, 5, 8, 9, 12, 14, 16 |
| Call to order | 1, 5, 7, 9, 13, 15, 17 |
| Motion to appeal from Speaker's decision generally | 3, 5, 7, 9, 13, 14, 17 |
| Motion to appeal fromSpeaker's decision re indecorum | 1, 5, 8, 9, 13, 14, 17 |
| Motion to amend the rules | 3, 5, 8, 9, 12, 14, 16 |
| Motion to amend an amendment | 3, 5, 7, 9, 13, 14, 16 |
| Motion to amend | 3, 5, 8, 9, 13, 14, 16 |
| Motion to determine time to which to adjourn | 2, 5, 8, 9, 13, 14, 16 |
| Motion to adjourn | 1, 5, 7, 10, 13, 14, 16 |

1. Question undebatable, sometimes remarks tacitly allowed.
2. Undebatable if another question is before the assembly.
3. Debatable question.
4. Limited debate only on propriety of postponement.
5. Does not allow reference to main question.

6. Opens the main question to debate.
7. Cannot be amended.
8. May be amended.
9. Can be reconsidered.
10. Cannot be reconsidered.
11. An affirmative vote on this question cannot be reconsidered.
12. Requires two-thirds vote, unless special rules have been enacted.
13. Simple majority suffices to determine the question.
14. Motion must be seconded.
15. Does not require to be seconded.
16. Not in order when another has the floor.
17. Always in order though another may have the floor.
18. May be moved and entered on the record when another has the floor, but the business then before the assembly may not be put aside. The motion must be made by one who voted with the prevailing side, and on the same day the original vote was taken.
19. Fixing the time to which an adjournment may be made; ranks first.
20. To adjourn without limitation; second.
21. Motion for the Orders of the Day; third.
22. Motion to lay on the table; fourth.
23. Motion for the previous question; fifth.
24. Motion to postpone definitely; sixth.
25. Motion to commit; seventh.
26. Motion to amend; eighth.
27. Motion to postpone indefinitely; ninth.
28. On motion to strike out words, "Shall the words stand part of the motion?" unless a majority sustains the words they are struck out.
29. On motion for previous question the form to be observed is: "Shall the main question be now put?" This, if carried, ends debate.
30. On an appeal from the chair's decision, "Shall the decision be sustained as the ruling of the house?" The chair is generally sustained.
31. On motion for Orders of the Day. "Will the house now proceed to the Orders of the Day?" This, if carried, supersedes intervening motions.
32. When an objection is raised to considering question, "Shall the question be considered?" objection may be made by any member before debate has commenced, but not subsequently.

## PARTNERSHIP

1. **Definition.**—A partnership is a voluntary contract between two or more persons, to place their property, labor or credit, or some or all of them, in some lawful business, to share the gains and losses in certain proportions.

2. **Kinds of Partnership.**—A **general partnership** is one in which the partners agree to enter into a certain business without limitation or condition. There may also be a partnership in a single transaction, such as to buy and sell a single oil lease. An **implied partnership** is one in which one party acts in such a way as to lead outsiders to believe that partnership actually exists. In a **special** or **limited** partnership there may be general partners with unlimited liability and special partners with limited lability.

**3. Kind of Partners.**—A **general partner** is one who is generally known as a partner and whose liability is not limited. A **secret partner** is one who is not openly declared as a partner. A **silent partner** takes no active part in the business but shares in the profits, losses, and liabilities. A **nominal partner** is held out as a partner without sharing in the profits or losses in the business.

**4. Forming a Partnership.**—A partnership is formed by an agreement usually in writing, but it may be oral. Any persons competent to transact business in their own names may become partners. Partners often have separate fields of endeavor, each doing the work for which he is best fitted. The articles or agreement should specify the division of profits and losses and should be very carefully drawn. In the absence of any written agreement the law assumes that the partners share profits and losses equally. A partnership may hold either real or personal property.

**5. Liability.**—Each partner is a general agent and has full authority to act for the partnership. Not only common property, but also all the private property of each partner may be taken, to satisfy the debts of the firm. One partner may discharge himself from liability by giving express notice to any customer or other person not to trust one or more of his co-partners. A partner cannot make the firm responsible for his separate or private debt, nor bind the firm by entering into engagements unconnected with, or foreign to, the partnership. The authority of a partner extends to the making or endorsing negotiable paper, and to all transactions fairly connected with the business. A person who, after due care, lends money to one of a partnership firm for the firm, can hold the firm liable, although the money is fraudulently appropriated by the partner to his own use. If a partner borrows money to increase the capital of the firm, the firm cannot be held liable for the payment of such sum. An illegal contract made by one partner will not bind the partnership.

**6. How to Avoid Liability.**—In order to avoid individual liability in transacting business the partners may form a corporation or a limited liability partnership. The latter consists of two or more general partners and also special partners, whose contribution and liability are made known to the public. These special partners are liable only for the amount of capital they advanced.

7. **Dissolution.**—There are numerous ways in which a partnership may be dissolved:

a. Any partner, upon due notice to others, may withdraw at any time provided no time for the continuation of the partnership is mentioned in the articles of agreement and provided that he acts in good faith without injury or loss to others. He should give public notice of his retirement to relieve himself from future liability.
b. The partnership may be dissolved by mutual consent.
c. The death of one of the partners automatically dissolves the partnership.
d. The taking in of a new partner constitutes a new partnership. This is usually a matter of reorganization and the new partnership may or may not assume lialilities of the old relationship.
e. The insanity or bankruptcy of either partner ends the partnership.
f. The court may dissolve a partnership for any good reason such as incapacity, drunkenness or fraud.
g. The expiration of the time specified in the articles of partnership acts as a dissolution.

8. **Liquidation.**—In case of failure the assets of the partnership must be used to pay the debts of the partnership, the assets of the partners to pay their personal debts. If in either case any property remains, the partnership property is applied on the personal debts and the partner's personal property must go towards the partnership debts. The affairs of the insolvent partnership are usually placed in the hands of one of the partners or with a receiver appointed by the court, either of whom have the right to liquidate the affairs of the partnership.

## Articles of Co-Partnership

ARTICLES OF AGREEMENT, made....., 19...., between .....and.....:

The said parties hereby agree to become co-partners, under the firm name of ....., and as such partners to carry on together the business of buying and selling all sorts of dry goods, at..... street, in the city of .....

The said.....agrees to contribute two thousand dollars ($2,000) to the capital of said firm; and the said.....agrees to contribute one thousand dollars ($1,000) to the same; the sum of

$2,500 of said capital to be expended in the purchase of a stock in trade.

The said.....shall have exclusive charge of all the buying for the firm.

All the net profits arising out of the business shall be divided in the following proportions, two-thirds to the said.....and one-third to the said.....

Each partner shall devote all his time, attention, and efforts to the said business.

Neither partner shall, without the consent of the other sign any bond, bill or note as surety, or otherwise become obligated as security for any other person.

Witness the hands and seals of the parties hereto, this.....day of ....., A. D. 19.....

.....(Seal)
.....(Seal)

### Agreement to Dissolve Partnership

We, the undersigned, do mutually agree that the within mentioned partnership be, and the same is, hereby dissolved, except for the purpose of final liquidation and settlement of the business thereof, and upon such settlement wholly to cease and determine.

Witness our hands and seals, this.....day of....., nineteen hundred and.....

Signed, Sealed and Delivered
in Presence of
.....
.....

.....(Seal)
.....(Seal)

## PASSPORTS

1. **Passports** are permissions granted by the government to its citizens, commending them to the protection of foreign countries which they may visit. They are issued only by the Secretary of State.

2. **To Whom Granted.**—They are issued only to citizens of the United States on written application. Blank forms of application can be secured by applying to the Secretary of State, Washington, D. C.

3. **Wife, Minor Children, and Servants** of an American citizen may all be included in the citizen's passport. Any other person requires a separate passport.

4. **Applications.**—A citizen of the United States desiring to procure a passport must make a written application in the form of an affidavit to the Secretary of State.

5. **Naturalized Citizens.**—A naturalized citizen must transmit his certificate of naturalization, or a duly certified copy of the court record thereof, with his application. He must state in his affidavit when and from what port he

emigrated, what ship he sailed in, and where he has lived since his arrival in the United States.

6. **Professional Titles** are not allowed in passports.

7. **Expiration.**—A passport expires two years from the date of its issuance. A new one can be obtained upon a new application.

8. **Fee.**—A fee of $1 is required to be collected for every citizen's passport, and must be paid in currency or postal money order. Drafts or checks will not be received.

9. **Blank Forms** will be furnished on application if it is stated whether they are for native or for naturalized citizens.

10. **Address** all communications to "Department of State," Passport Division, Washington, D. C." A passport should always be carried upon the person—never in a trunk or valise.

## PATENTS

1. **Definition.**—As here used the word Patent is defined to mean the granting by the United States to inventors for a limited time the exclusive right to the use and manufacture of their own inventions. The instrument by which this privilege is confirmed to the inventor is called the "Letters

Patent" and is issued in the name of the United States of America under the seal of the Patent office and is signed by the Secretary of the Interior, and countersigned by the Commissioner of Patents.

2. **For What Granted.**—Patents are granted for any new and useful machine, manufacture, or composition of matter, or any new and useful improvement thereon not known and used by others in this country and not patented or described in any printed publication in this or any foreign country before its invention and discovery here, and not in public use or on sale for more than two years prior to the application for a patent. Every civilized country in the world has taken out patents in the United States.

3. **Foreign Patent Not a Bar.**—A person is not debarred from receiving a patent for his inventions or discoveries by reason of its first having been patented in a foreign country unless the same has been introduced into public use in the United States for more than two years prior to the application therein.

4. **Duration of Patent.**—A patent is good for seventeen years, but now cannot be extended except by act of Congress. Inventions previously patented in a foreign country must expire at the same time that the foreign patent expires, but in no case shall they be extended more than seventeen years.

5. **How Secured.**—The method of securing patents is by petition, which must be in writing addressed to the Commissioner of Patents, and must state the name and residence of the petitioner requesting the granting of a patent, designating by title the invention sought to be patented, and contain a reference to the specifications for a full disclosure of such invention and must be signed by the applicant and attested by two witnesses. An alien may obtain a patent on the same terms as a citizen.

6. **Specifications.**—The specifications above referred to are a written description of the invention or discovery, and the manner of making, constructing, composing, and using the same, and they are required to be in such full, clear, concise and exact terms as to enable any person skilled in the art or science to which the invention or discovery appertains to make, construct, compose and use the same.

The specifications and claims should be absolutely written on but one side of the paper. All interlineations and erasures should be avoided.

7. **The Oath.**—The applicant for a patent must make oath of affirmation that he verily believes himself to be the first and original discoverer of the art, machine, manufacture, composition, or improvement for which he solicits a patent; that he does not know and does not believe that the same was ever before known and used and shall state of what country he is a citizen and where he resides.

The oath should be sworn to before a notary public or some other officer authorized to administer oaths having an official seal.

8. **Drawings.**—The applicant for patent is required also to furnish drawings for his invention whenever the nature of the case admits. The drawing must be signed by the inventor and must be attested by two witnesses; it must show every feature of the invention covered by the claims. When the invention is an improvement on some old machine the drawing must exhibit in one or more views the invention itself disconnected from the old structure and also in another view so much of the old structure as will suffice to show the connection of the invention therewith.

9. **Material.**—Drawings must be made upon pure white, calendared, smooth, bristol board paper, of three sheet thickness. India ink alone must be used, sheets must be exactly ten by fifteen inches in size. Drawings must be made with pen only, and must be absolutely black. Drawings must be made with the fewest lines possible consistent with clearness.

The scale to which a drawing is made must be large enough to show the mechanism without crowding.

10. **Signature** of the inventor should be placed at the lower right hand corner of each sheet of drawing and two attesting witness should sign at the lower left hand corner. Drawings should be rolled for transmission to the patent office.

11. **Model.**—A model must be furnished when required by the commissioner.

12. **Specimens** must be furnished when required by the commissioner.

13. **Attorneys.**—The practice of the patent office allows the applicant to retain an attorney and when the petition is

prosecuted by an attorney a power of attorney should be included in the petition. In ordinary cases it is always best to retain some experienced patent attorney to prosecute the application.

**14. Caveats.**—Formerly an inventor could file a caveat setting forth the object and distinguishing characteristics of his invention and asking protection for his right until he had finished his invention. This operated for one year. This law was repealed in 1910 so that the only way an inventor can secure any form of federal protection on his patent is by applying for letters patent thereon.

**15. Fees.**—The schedule of fees and prices of publications can be had on application to the Commissioner of Patents, Washington, D. C. The fee for filing applications ranges from $10 to $30. For any other information concerning patents address the commissioner as above.

**16. Preliminary Examinations.**—Applicant for patent can save considerable expense often times by having a preliminary examination made of the patents allowed by the patent office to determine whether or not the invention has been patented by somebody else. This examination cannot be made by the commissioner or any one of his office, but patent attorneys will make the examination for a small fee.

**17. Assignments.**—Patents may be assigned in whole or in part, and the right to manufacture, sell and use the patent in any county, state, township or other district may be granted by the holder of the patent. All such assignments or transfers should be in writing, and are void unless recorded in the Patent Office within three months from their date.

**18. Foreign Patents.**—The first cost of securing foreign patents is small, but the upkeep is staggering. European countries will protect patents only as long as the articles are actually manufactured within their own borders, and as long as the taxes are paid. In the United States foreigners can have their inventions patented without manufacturing them here, and without any taxes whatever. The following table gives some idea of the cost of exploitation in the different countries:

## The Cost of Foreign Patents

| COUNTRY | Patentee must start to Manufacture | First Cost (Approximate) | Total Taxes over period of years | Total |
|---|---|---|---|---|
| United States . . . . | Unnecessary | $65.00 | None | $ 65.00 |
| Canada . . . . . | Within 2 years | 65.00 | $ 40.00 | 105.00 |
| Italy . . . . . | Within 2 years | 65.00 | 310.00 | 375.00 |
| France . . . . . | Within 1 year | 60.00 | 320.00 | 382.00 |
| England . . . . . | Within 3 years | 65.00 | 480.00 | 545.00 |
| Austria . . . . . | Within 3 years | 65.00 | 940.00 | 1005.00 |
| Germany . . . . . | Unnecessary | 75.00 | 1325.00 | 1400.00 |

## Assignment of Patent Right

WHEREAS, letters-patent, bearing the date the 10th of January, 19...., were granted and issued by the Government of the United States, under the seal thereof, to....., of the town of....., of the State of Pennsylvania, for (here state the nature of the invention) a more particular and full description thereof is annexed to the said letters-patents in a schedule; by which letters-patents the full and exclusive right and liberty of making and using the said invention, and of vending the same to others to be used, was granted to the said....., his heirs, executors, and administrators, or assigns, for the term of seventeen years, from the same date.

Now, know all men by these presents, that I, the said.....for and in consideration of the sum of.....to me in hand paid, the receipt whereof is hereby acknowledged, have granted, assigned and set over, and by these presents do grant, assign, and set over unto....., of the said town of ....., his executors, administrators, and assigns, forever, the said letters-patent, and all my right, title and interest in and to the said invention, so granted unto me, to have and to hold the said letters-patent and invention, with all benefit, profit and advantage thereof, unto the said....., his executors, administrators, and assigns, in as full, ample, and beneficial manner, to all intents and purposes, as I, the said.....by virtue of the said letters-patent, may or might have or hold the same, for and during all the rest and residue of the term for which said letters-patent are granted.

In witness whereof, I have hereto affixed my hand and seal, this 10th day of June, 19....

In the presence of

..... (Signature)

.....

(Acknowledgement)

## PAYMENT

**1. Legal Tender.**—In all agreements the payment is to be made in cash unless otherwise stipulated. Gold, United States Notes and Federal Reserve Notes are legal tender for an unlimited amount. Silver is legal tender up to the value of ten dollars; one cent and five cent pieces up to twenty-five cents. National Bank Notes may be offered to the Government and between banks as unlimited legal tender, but an individual may refuse to accept them in payment of a debt.

**2. Explanation.**—Suppose "A" owed "B" one thousand dollars and offered to pay him one thousand silver dollars which "B" refused to accept. The law could compel "B" to accept ten of the silver dollars only. "B" could then sue on the amount of debt $990.00 and "A" could not offer the defense that he had offered the money and been refused. This explains what is meant by legal tender.

**3. Checks.**—In modern times checks are given and received in payment of debts. Legally, however, a check is not payment until it is paid. In other words, a check is a conditional payment and if it so happens that the check is not honored, the creditor can sue either on the check or on the original bill. He could also sue any of the endorsers whose names appear on the check.

**4. Notes.**—A note given in payment for a debt, may or may not cancel the debt. If the parties intended the note as actual payment the debtor cannot sue on the original debt, he must sue to recover on the note itself. This is a question of the facts in the case to be determined by the court.

**5. Applying Payment When There is More Than One Debt.**—If a debtor owes more than one debt to the same creditor, he can apply his payments in any way he sees fit. If he fails to do so the creditor can make the application, and if neither does so, the law applies the payment first to interest due and the balance to the oldest debt. A signer on a note may insist that payments be applied first to the debt on which he is surety. Under the Negotiable Instruments law a bank will pay a customer's note when due if the maker has made the note payable at the bank. The bank does not pay an immature or an overdue note for its depositors.

**6. Receipts.**—A receipt for a debt is regarded on its face as evidence of payment. This evidence, however, is not conclusive and can sometimes be contradicted by other evidence. For example, suppose "A" gave "B" a receipt for $20.00 and afterwards discovered that the bill "B" had given him was a counterfeit. "A" could introduce evidence to prove fraud and thus invalidate the receipt. A contract embodied in a receipt without seal or consideration is not binding, but if there is a valuable consideration, or if the instrument is under seal, such a contract would be as lawful as any other.

**7. In Full of Account.**—The words "in full of account" written on the face of a check do not always constitute a valid receipt. If the check does not satisfy the debt, and is cashed, the creditor can still collect the balance due, although he may have some difficulty in explaining matters in the courts.

## PRESCRIPTIVE RIGHTS

**1. Definition.**—A prescriptive right is a right acquired by use and time and allowed by law.

**2. A Right of Way.**—A person may acquire a permanent right of way over another's land by passing over that land to his own land for a period of 15 years or more. This right of way cannot be acquired against a minor or against any one who is incapable of defending his possessions. A person attempting to establish such a right of way could be stopped by the court if the owner could show that the passing over his land was detrimental to it.

**3. A Way of Necessity.**—Some-times a person sells a part of his farm which is not located on the road. The law allows the purchaser the right to enter and leave the premises, and such a right is called "a way of necessity." He must exercise reasonable care in selecting his road to the main road, and this road ultimately becomes part of the title to the property.

**4. Restrictions.**—The law prescribes restrictions on the use of a right of way or a way of necessity. Thus the purchaser of the farm away from the road could not subdivide it and transfer his right of way to others without permission of the real owner of the way. However, more than one person can claim a right of way. A tenant can never acquire a right of way beyond the duration of his lease.

**5. Building Rights.**—

a. The owner of a building has no action against one who cuts off his light, air, or view by erecting a building on adjacent land, unless the right has been expressly acquired. The right to light, air and unobstructed view may sometimes be acquired by deed or by presumption. If the owner has acquired such a right he loses it by tearing down the building and erecting a new one.

b. A person has the right to the lateral support of his land. If, therefore, a neighbor excavates in an unreasonable manner and his building consequently falls down, the owner has an action against the excavator. This rule does not apply to the side of a house located on a city street.

6. **Water Rights.**—

a. The water which runs through a person's land may legally be held back for a short time to furnish water power, or it may be used for any other reasonable purpose.

b. Neither a person nor a municipality may dump impurities or sewage into a stream to make the water unfit for use below.

c. As a general rule ditches or obstructions may not be dug either to hinder or to hasten the flow of water from one person's land to another in other than the natural way.

d. The owner of a lake or stream may cut any reasonable amount of ice therefrom.

e. A person digging a well cannot be held for cutting off his neighbor's water supply, unless it can be proved that he acted maliciously.

## PROFESSIONAL MEN

1. **Doctors.**—A doctor or physician is a person who has (1) been educated in the science of medicine and surgery, (2) graduated from a medical college, (3) passed the State Medical examination, and (4) has been licensed by the state to practice his profession.

2. **Confidential Disclosures.**—It frequently happens that a doctor is called upon to give expert testimony in a civil or criminal case. He is an expert on the anatomy of the human body, but he is not required or permitted to divulge on the witness stand any confidential statement or information obtained in his professional relationship with his patient.

3. **Liability.**—A doctor is not legally liable for the success or failure of his treatment. He is required to exercise the greatest care, diligence, and skill in his work, and can be held criminally liable for carelessness and gross inefficiency.

The crime of malpractice consists of any injurious or improper treatment.

4. **Lawyers.**—A lawyer is a person who has (1) been educated in the science of law, (2) graduated from a law school, and (3) has passed the State bar examination. Every man is entitled by law to have a lawyer represent him in his trial, but the court will furnish the services of a lawyer only in criminal cases.

5. **Confidential Disclosures.**—What has already been said about the confidential relationship existing between doctors and patients, applies perhaps even more strongly to attorneys and their clients. The matters spoken of between them are confidential and no law can force the lawyer to divulge them on the witness stand.

6. **Liens.**—An attorney has a lien for the payment of his fee on all documents, moneys and other things coming into his possession.

7. **Liability.**—A lawyer cannot be held liable for the success of his case unless he fails to exercise reasonable care and judgment.

## SALE AND TRANSFER OF PROPERTY

1. **Definition.**—A sale is the exchange of property for consideration called **the price** which is either to be paid at once or at some future date. An agreement to sell at a future date is called an **executory sale.** A present sale is called an **executed sale.** A sale may be made either in writing under seal, or orally.

2. **What Constitutes a Sale.**—There are many complicated things pertaining to a sale which every thoughtful person should understand:—

a. Sales are based on mutual agreement.

b. The thing sold must either exist at the time of the sale or there must be a well-founded reason that it will be in existence and in possession of the seller. For example: If a man sold a horse for $100 and it transpires that the horse died before the actual time of the sale the transaction would not be a sale, otherwise it would.

c. Grain or other produce not yet sowed or planted can be sold because the seller may reasonably expect a crop. Machinery or other manufactured goods may be sold before they are made and the seller can be held to perform his part of the contract the same as though the articles actually existed at the time of the sale.

d. The thing sold must be specified and set apart as the property of the buyer in order to complete the sale.

e. When nothing is said as to the time of payment when the sale is made the law presumes that the property must be paid for before the purchaser can secure possession. If credit is agreed upon the buyer is entitled to immediate possession.

f. When goods are sold "on sale or return" the title passes to the purchaser immediately, but may go back to the seller if the goods are returned within the time specified in the agreement.

g. If goods are sold on approval the title passes to the buyer when he signifies his approval or when he keeps them beyond the time set for their return.

h. When no price is fixed in the agreement the purchaser must pay a reasonable price.

i. Goods are often sold and shipped subject to Bill of Lading, that is, payment is not made until the goods are delivered. Thus the seller controls the property until it is paid for.

3. **Statute of Frauds.**—**Both the National Sales Act and the Statute of Frauds** provide that a contract to sell $500.00 worth of goods or more, cannot be enforced unless

a. the purchaser advances a sum of money to bind the bargain, or

b. unless the purchaser accept a part of the goods, or

c. unless the contract is in writing.

This rule, of course, does not apply when the goods sold are to be manufactured especially for the buyer and would not be readily salable to others.

4. **Relieving the Buyer.**—The buyer's obligation is limited in various ways. For instance, the contract may be voided.

a. if the goods purchased have been damaged or destroyed before delivery;

b. if in his own opinion the goods are not satisfactory.

5. **Warranties.**—When goods are sold there are certain warranties by the seller which may be either expressed or implied. The statement that a horse is sound and free from vice is an expressed warranty. As a matter of fact any statement made by the seller tending to induce the buyer to purchase is an express warranty. In every sale there are implied warranties, (1) that the seller has the title to the property, and (2) that the goods will correspond with the description or sample. Any defects which can be seen in property or in animals when sold do not relieve the buyer from meeting his contract though he claims that he did not see the defects. The law does not furnish eyes for the purchaser of property. But defects in property or animals which cannot be seen and of which the seller makes no statement, but recommends as good or sound, relieves the buyer from his contract.

6. **The Bulk Sales Law** is quite general in the different States. It provides that when a stock of goods or merchandise is sold, transferred or consigned in bulk, the seller's creditors must be notified in writing at least five days before the sale is completed. Thus when a merchant sells out his merchandise in bulk, the buyer should keep the following considerations in mind: First he should demand a bill of sale. Second he should either demand an affidavit from the seller that he has notified the creditors, or he should secure a sworn list of these creditors, and notify them himself. This law applies to corporations, partnerships and individuals, and any attempt to evade its provisions carries with it a penalty of $1000 fine, a year's imprisonment or both. If the creditors are not properly notified they can hold the purchaser liable for the debts.

7. **Stock Market Speculation.**—Trading in stocks, grains and cotton, together with the buying and selling of futures is now largely regulated by statute. A contract of this kind which involves the actual delivery of property is perfectly legal, even if at the time the sale was made, the seller did not own the property sold. However, when no exchange of property is ever contemplated and the parties merely

propose to effect a settlement based on the market changes, the contract is not legal.

## Form of Bill of Sale

KNOW ALL MEN BY THESE PRESENTS, That I,..... of ....., .....County, ....., in consideration of six hundred ($600) dollars to me in hand paid by.....of the same place, the receipt of which is hereby acknowledged, do hereby grant, sell, assign, transfer and deliver unto the said....., his heirs and assigns, the following goods and chattels, to-wit:

| | |
|---|---|
| Four Yearling Heifers, at $50.00 each..... | $200.00 |
| 30 head of Sheep, at $4.00 each..... | 120.00 |
| Five sets of Harness, at $20.00 each..... | 100.00 |
| Two Farm Wagons, at $35.00 each..... | 70.00 |
| One Corn Planter, at $20.00..... | 20.00 |
| Six Plows, at $15.00 each..... | 90.00 |

To have and to hold all of the said goods and chattels to the said ....., his heirs and assigns forever. And I do hereby covenant to and with the said.....that I am the legal owner of said goods and chattels; that they are free and clear from all other and prior sales and incumbrances; that I have good right to sell and convey the same as aforesaid, and that in the peaceable possession of the said.....I will forever warrant and defend the same against the lawful claims and demands of all persons whomsoever.

In witness whereof I have hereunto set my hand and seal this 29th day of June, A. D. 19....

In the presence of

.....

.....

(Signed) .....(Seal)

NOTE: In selling or buying automobiles, especially used cars, it is always wise to insert the name of the machine, its model, the engine number, the car number, also the type of car, its color and any other information which will help to identify it.

## Agreement Between Merchant and Traveling Salesman

Agreement made this..... of ....., between.....of ....., and..... of ....., merchants and co-partners, doing business under the firm name and style of..... & Co., of the one part, and.....of....., traveling salesman of the other part.

1. The said salesman shall enter into the service of said firm as a traveler for them in their business of.....merchants for the period of.....years from the.....day of..... 19...., subject to the general control of said firm.

2. The said salesman shall devote the whole of his time, attention, and energies to the performance of his duties as such salesman, and shall not, either directly or indirectly, alone or in partnership, be connected with or concerned in any other business or pursuit during the said term of .....years.

3. The said salesman shall, subject to the control of the said firm, keep proper books of account, and make due and correct entries of the price of all goods sold and of all transactions and dealings of and in relation to the said business, and shall serve the said firm diligently and according to his best abilities in all respects.

4. The fixed salary of the said salesman shall be the sum of..... dollars per week for the first year, payable by the said firm weekly from the commencement of the said service, on the.....day of.....,

and.....dallars per week for the.....payable weekly in like manner, from the commencement of such respective years.

5. The reasonable traveling expenses and hotel bills of the said salesman, incurred in connection with the business of said firm, shall be paid by the said firm, and the said firm shall from week to week pay to the said salesman the said traveling expenses and hotel bills in addition to the said fixed salary.

In witness, etc.

.....
.....

## SHIPPING

**1. Registration.**—The law requires all ships flying the United States' flag to be registered. A ship engaged in foreign trade must be **registered** with the collector of customs in the district in which her home port is situated. This formality is called **enrollment** in the case of large ships engaged in coastwise or internal commerce, and **license** for smaller ships.

**2. Ownership.**—Vessels may be owned by individuals, partnerships or corporations, and the ownership may be acquired either by purchase or construction. If several individuals own a ship they are tenants in common, each has his share of the profits and expenses, and no one individual can bind the others except for the necessary maintainance of the ship. When a partnership or corporation owns a vessel, the ordinary rules of corporations and partnership apply.

**3. Sale.**—The owner of a ship can sell or mortgage his interest at any time, but in order to effect a good title the contract should be in writing. If a ship is sold while it is at sea, the buyer takes it subject to all contracts made by the master before learning of the sale. In all other cases the buyer is not liable for repairs made or supplies furnished previous to the sale.

**4. Maritime Loans.**—In cases of great emergency, for example when a ship is in a foreign port without funds to purchase necessary supplies, a master can secure a maritime loan in which the vessel is put up as security. If the vessel fails to reach home the lender is out his money, but in the event of a safe arrival, he has the boat as security and can hold the master personally. Such a contract calls for a high rate of interest but is perfectly legal.

THE SPIRIT OF TRANSPORTATION

5. **The Master** of a vessel is the chief officer. The law gives him authority to bind the owners for necessary repairs or supplies. He must render accurate accounts of his actions and money received, but his first duty is to the passengers and the crew. He has the power to regulate their actions in any manner which is necessary to their safety, comfort and good order. If on account of illness, insanity or other reason, the master is unable to perform his duties, they pass to the lower officers in the order of their rank.

6. **The Seamen.**—The law requires the execution of shipping papers between the master and the seamen before starting on a voyage to a foreign country or from one state to another. These articles must specify:

a. the exact nature of the voyage.
b. the destination.
c. the duration.
d. the amount of wages to be paid each seaman.

If shipping articles are not properly executed, or if the master violates the contract, the seaman can leave the ship and recover the highest rate of wages, his expenses home, and damages. On the other hand a seaman may be discharged for any of the following reasons:

a. long continued disobedience.
b. drunkenness.
c. incapacity (due to his own conduct.)

7. **Courts of Admiralty** act when there are disputes as to the rights or liabilities of the parties relative to the shipping laws.

## STATUTES OF LIMITATION

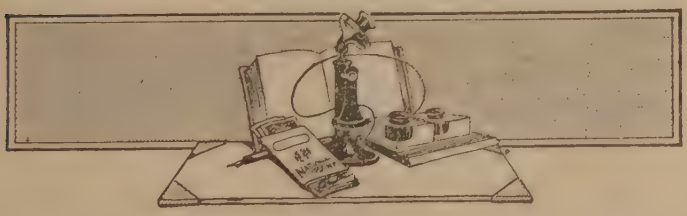
1. **Definition.**—A statute of limitation is a law which specifies the time in which debts are outlawed. All of our states have such laws providing different periods of time, varying from one to twenty years, within which legal actions must be brought, before the courts are closed to them.

2. **The Time Begins to Run** as soon as the debt is incurred, or in accounts, from the date of the last purchase. The debt may be renewed by a partial payment, by an express promise to pay, or by a written acknowledgment in a

note, or paper of that character, together with an expressed willingness to pay. The following ready reference table shows the essential figures in the several states:

| STATES AND TERRITORIES | Contracts in Writing | Sealed Instruments | Judgments | Open Accounts | STATES AND TERRITORIES | Contracts in Writing | Sealed Instruments | Judgments | Open Accounts |
|---|---|---|---|---|---|---|---|---|---|
| | Yrs. | Yrs. | Yrs. | Yrs. | | Yrs. | Yrs. | Yrs. | Yrs. |
| Alabama | 6 | 10 | 10 | 3 | Nevada | 6 | 6 | 6 | 4 |
| Alaska | 6 | 10 | 10 | 6 | New Hampshire | 6 | 20 | 20 | 6 |
| Arkansas | 5 | 5 | 10 | 3 | New Jersey | 6 | 16 | 20 | 6 |
| Arizona | 4 | 4 | 5 | 3 | New Mexico | 6 | 6 | 7 | 4 |
| California | 4 | 4 | 5 | 4 | New York | 6 | 20 | 20 | 6 |
| Colorado | 6 | 6 | 6 | 6 | North Carolina | 3 | 10 | 10 | 3 |
| Connecticut | 6 | 17 | 15 | 3 | North Dakota | 6 | 6 | 10 | 6 |
| Delaware | 6 | 20 | 10 | 3 | Ohio | 15 | 15 | 20 | 6 |
| Dist. of Columbia | 3 | 12 | 12 | 3 | Oklahoma | 5 | 5 | 5 | 3 |
| Florida | 5 | 20 | 20 | 4 | Oregon | 6 | 10 | 10 | 6 |
| Georgia | 6 | 20 | 7 | 4 | Pennsylvania | 6 | 20 | 20 | 6 |
| Idaho | 5 | 5 | 6 | 4 | Rhode Island | 6 | 20 | 20 | 6 |
| Illinois | 10 | 10 | 20 | 5 | South Carolina | 6 | 20 | 10 | 6 |
| Indiana | 10 | 20 | 20 | 6 | South Dakota | 6 | 20 | 20 | 6 |
| Iowa | 10 | 10 | 20 | 5 | Tennessee | 6 | 10 | 10 | 6 |
| Kansas | 5 | 5 | 5 | 3 | Texas | 4 | 4 | 10 | 2 |
| *Kentucky | 15 | 15 | 15 | 5 | Utah | 6 | 6 | 8 | 4 |
| Louisiana | 5 | 10 | 10 | 3 | Vermont | 6 | 8 | 8 | 6 |
| Maine | 6 | 20 | 20 | 6 | Virginia | 5 | 10 | 20 | 3 |
| Maryland | 3 | 12 | 12 | 3 | Washington | 6 | 6 | 5 | 3 |
| Massachusetts | 6 | 20 | 20 | 6 | W. Virginia | 10 | 10 | 10 | 5 |
| Michigan | 6 | 10 | 10 | 6 | Wisconsin | 6 | 20 | 20 | 6 |
| Minnesota | 6 | 6 | 10 | 6 | Wyoming | 5 | 5 | 5 | 8† |
| Mississippi | 6 | 6 | 7 | 3 | Hawaii | 6 | | 20 | 6 |
| Missouri | 10 | 10 | 10 | 5 | Canada | 6 | 20 | 20 | 6 |
| Montana | 8 | 8 | 10 | 3 | New Brunswick | 6 | 20 | 20 | 6 |
| Nebraska | 5 | 5 | 5 | 4 | Nova Scotia | 6 | 20 | 20 | 6 |

*Except as to foreign claims, then 2 years.
†Store accounts 2 years.



## TORTS OR WRONGS

1. **Definition.**—A tort is a private or civil wrong or injury arising independent of contract. The proper remedy is an action for damages.

2. **Torts and Crimes.**—There is a distinction between torts and crimes. If a wrongful act violates a private right it is a tort; if it violates a public right it is a crime. Very frequently the wrongful act is in violation of both private and public rights. In these cases, even if the wrongdoer make personal restitution or settlement with the person wronged, the state still has the right to punish the wrongdoer for the crime. Suppose A steals $500 from B who finds it out and succeeds in getting A to return the money. "A" has still committed a crime against the public and can be punished as the law provides.

3. **Violation of Contract.**—Contracts often prescribe a damage or penalty for the violator.

4. **Assault and Battery.**—A person who threatens or attempts to strike another person is guilty of assault, even though not followed by actual battery. A successful assault becomes a battery when the injury is actually done.

   a. Every person is entitled by law to liberty, security of life and to the security of his property.
   b. Mere words do not constitute an assault.
   c. The wrong consists not so much in the actual striking of the person as in the manner and spirit of the act.
   d. Accidental injury is not a battery.
   e. A blow unlawfully aimed at one person but striking another is a battery.
   f. Reasonable methods of self defense may be employed in resisting a battery and in defending a member of one's family, or property.
   g. A school teacher has the right to require obedience to reasonable rules, and proper attention to his authority, and to inflict punishment for disobedience. Hence, reasonable punishment, having in mind the age, size, and physical condition of the pupil is not a battery.

5. **Defamation.**—A defamation is a false and malicious imputation of character or reputation either by slander or by libel.

a. Every person has a right to his good reputation.

b. Every person is assumed to have a good reputation until the contrary is proven.

c. Slander is defamation published orally.

d. Libel is defamation published by writing or printing.

6. **Slander.**—In simple words this tort consists of speaking words in another's hearing which injure a person's reputation. The United States Supreme Court has classified slanderous words which are objectionable:

1. Words falsely spoken of a person which impute to the party the commission of some criminal offense involving moral turpitude for which the party, if the charge is true, may be indicted and punished.
2. Words falsely spoken of a person which impute that the party is infected with some infectious disease, which, if the charge is true, would exclude the party from society.
3. Defamatory words spoken of a party which impute to the party unfitness to perform the duties of an office or employment of profit, or the want of integrity in the discharge of the duties of such an office or employment.
4. Defamatory words falsely spoken of a party which prejudice such party in his or her profession or trade.
5. Defamatory words falsely spoken of a person, which, though not in themselves actionable, occasion the party special damage.

7. **Libel.**—It is even more dangerous to defame a person's character in writing. Many words when written or printed are libelous, which if spoken would not be slander-out without proof of special injury.

a. The proprietors of books and newspapers are liable for the publication of libelous matter, though made without their knowledge and even against their orders.

b. Newsdealers are immune from any liability for selling or displaying newspapers or magazines which contain libelous matter.

c. In order to hold the editor or proprietor of the printing plant it must be proved that the libelous matter could be recognized by an intelligent person as libel.

8. **The Defenses** are given below:—

a. The truth of the charge is a complete defense to an action for damages because a person has no right to a false character.

b. A privileged communication, such as what is said or written in a judicial proceeding or in a legitimate newspaper report thereof, is not held to be libelous matter. This privilege extends to the heads of the executive departments of government. Statements rendered by mercantile agencies, and the reports of many semi-public societies are also conditionally privileged.

c. Fair comment is still another defense. The conduct of public men is held to be a proper matter for public discussion, so long as the writer keeps within the bounds of an honest intention to discharge a duty to the public, and does not make the occasion a mere cover for false allegations. The same rule applies to newspaper reports of literary or artistic productions offered to the public.

9. **False Imprisonment** is a crime and the person unlawfully imprisoned has a civil action for damages. The defense may be that the officer was clothed with the proper authority, and in cases of parent and child, guardian and ward or teacher and pupil it may be shown that the alleged wrongdoer was acting within his duty.

10. **Malicious Prosecution** is another wrong. This is the malicious instituting of suit without probable cause, and both the malice and the lack of probable cause must be proved. A suit to recover for this wrong cannot be commenced before the alleged malicious prosecution has come to an end. That the party acted on the advice of his attorney after a full and fair disclosure of the facts is a good defense.

11. **Conspiracy.**—A conspiracy is a combination of two or more persons to accomplish an unlawful end which is injurious to another. Thus a trade union may lawfully agree that they will stop work, or that they will not work with certain other laborers. but they commit a wrong just

as soon as they interfere with the liberty of others. On the other hand a combination of employers who use unlawful methods to exclude a certain class of workmen, are also guilty of a wrong. An agreement among manufacturers that they will all operate as the majority agree is a conspiracy in restraint of trade.

12. **Religious Liberty** is guaranteed to every man by the constitution. The law does not interfere with religious institutions unless they wrongfully expel a member or otherwise break the laws.

13. **Search and Seizure.**—It is unlawful to search on private premises unless a search warrant has been issued by proper authority. It is a criminal offense to open another's letters, or to retain or pry into them. The National and State Constitutions protect persons against unreasonable searches and seizures.

14. **Nuisances.**—A nuisance is anything wrongfully done or permitted which injures or annoys another in the enjoyment of his legal rights. Below is a list of some of the common nuisances subject to an action in tort:

a. To remove or weaken the lateral support of the adjoining land.
b. To mine or tunnel under another's land without providing suitable support.
c. When part of one's building extends over another's land.
d. To alow filthy deposits to accumulate on one's property.
e. To deposit refuse in a stream of water.
f. When one's water pipes or reservoir burst causing damage to a neighbor's property.
g. To erect a dam, backing up the water to injure the land of another.
h. Negligence in taking care of a fire resulting in damage to a neighbor's property is an actionable wrong.
i. To explode fireworks when prohibited by statute or ordinance.
j. To use or care for explosives, loaded weapons, or dangerous machines in a negligent manner.
k. To conduct a place of business or amusement of any kind in a way that will materially interfere

with the ordinary physical comfort of others. This covers dogs, carousing, smoke, dust, noise, odors, etc.

l. To unlawfully adulterate food or drink.

m. To negligently allow poisonous or offensive materials on your premises which may cause injury to others. This rule does not apply to trespassers.

n. To put or allow a heavy article or substance where it is likely to fall or injure persons or property.

o. To erect, operate and maintain electrical appliances without reasonable care in proportion to their danger.

p. To be negligent in the care of domestic animals or pets, or to allow vicious animals to stray.

q. For a State, county, or municipality to allow defects in streets, highways, or sidewalks which result in injury to persons or property.

## TRADE-MARKS

**1. Definition.**—A trade-mark is an emblem or symbol to designate the goods of a merchant or manufacturer.

**2. Registration.**—The owner of a trade-mark may have it registered in the copyright office and thus acquire the right to keep others from using it.

**3. Steps Necessary to Secure Registration.**—The first step is to file or sign application addressed to the Commissioner of Patents. This must include

a. the name, domicile, location and citizenship of applicant.

b. description of the goods in which trademark is used.

c. method of affixing trademark.

d. length of time the trade-mark has been used.

e. description of trade-mark.

f. drawing and specimens of the trade-mark.

The next step is the payment of the sum of ten dollars for registration.

**4. How long is Trade-Mark Protected.**—A certificate of registration remains in force for twenty years. If applica-

tion is made not more than six months prior to the expiration of the period, the certificate may be renewed upon payment of the regular fee of $10.00.

TYPICAL TRADEMARKS

5. **Restrictions.**—The law has placed certain restrictions on the registration of trade-marks. For example it is impossible to register a trademark:—

a. where the mark is immoral or scandalous.
b. if it consists of or compromises the flag or other insignia of the United States, any State or Ally or any foreign country.
c. if it consists of the emblem of any fraternal society or club.
d. when it is similar to one used by another manufacturer who manufactures similar goods.
e. when it merely consists of the name of the individual, firm, corporation, or association, not set forth in any unusual way.
f. when it merely consists of words or devices.
g. if it consists of the photograph of an individual without his consent in writing.
h. when it consists of a mark used in unlawful business, or upon any injurious article.

6. **Infringement.**—The registration of a trade-mark is evidence of ownership. In case of infringement the owner can bring an action either in law or in equity. Thus:—

a. he may have an injunction issued compelling the wrongdoer to cease, and
b. he may bring an action for the damages he has sustained by the wrongful use of his trade-mark.

**7. Foreign Trademarks.**—There is a difference in the registration of trademarks here and abroad. In the United States, the first use of the trade-mark determines the owner. On the other hand in foreign countries priority is overlooked and the first person to register the mark can prove his ownership. It is important, therefore, that a new brand or trade-mark be registered abroad just as soon as possible even though foreign trade is not contemplated just at that time. To be on the safe side this requires the services of a specialist right on the ground who is familiar with the local requirements. Foreign registrations are good for a limited time, and may be renewed upon proper application and the payment of the necessary fees.

## VICIOUS ANIMALS

**1. The Owner's Responsibility.**—The owners of vicious animals are responsible for any injuries they may cause while running at large. If a dog annoys travelers on the public highway by scaring horses and frightening children, the owner is responsible in damages to the injured party. The owner of a vicious bull or stallion is required to exercise the greatest care in protecting the public from injury. If a person on a social or business errand is injured by a savage animal on the premises of the owner, the owner is responsible.

**2. Trespassers.**—These rules do not apply to trespassers who know the dangerous nature of the animal.

**3. Domestic Animals.**—The owner of domestic animals is responsible in case injury results due to his own negligence. On the other hand, if the animals trespass on a neighbor's land they cannot be injured or killed by the neighbor. He has a legal remedy and can collect damages.

**4. Fence Laws.**—In certain sections of the country there are open lands where cattle and other animals are allowed to graze at will. The owners of cultivated land are there required to provide their own protection against the animals.

Most states, however, have stock laws providing that animals must be kept within an enclosure, and if damage results the owner of the animals is responsible.

## WILL

1. **Definitions.**—A **will** or **testament** is a written instrument or verbal statement making disposition of a person's property to take effect after his death. A **testator** is the maker of a will or testament when same is made by a male person, if a female the maker is called a **testatrix.** A **codicil** is an addition or alteration of a part of an executed will. A **legacy** is a gift or bequest of money or personal property by will. The person to whom it is given is called the **legatee,** and if the gift consists of the remainder of the property after paying all debts and other legacies he is called the **residuary legatee.** A person to whom real estate is given is called a **devisee.** An **executor** is the male person named in the will to whom is entrusted the duty of administrating the estate of the testator according to the provisions of the will. If the will names a female person, she is called the **executrix.** An **administrator** is the male person appointed by the court to administer an estate of a deceased person, who either did not have a will or the party named in the will is incompetent or refuses to act. If the party appointed by the court is a female person, she is called the **administratrix.**

2. **Who May Make a Will.**—All persons are competent to make a will except infants, persons of unsound mind and idiots. In like manner any person who is competent to make a will can appoint his own executor. If the person so appointed is legally competent to transact business the court will confirm the appointment if he lives within the jurisdiction of the court.

3. **Kinds of Wills.**—There are two kinds of wills, written and unwritten. An unwritten will is called **nuncupative.** Such a will might be made by a soldier in active service or a sailor at sea and depends upon proof of the persons hearing it. They are unsafe and obsolete.

4. **Requirements:—**
   a. A will should be written.
   b. A will should be dated.

c. Testator should sign his name in full, by mark if necessary.

d. It should be witnessed by two or more disinterested parties.

e. It is not necessary that the witnesses should know the contents of the will. It is generally necessary that testator acknowledge to them that it is his will, sign it in their presence, and request them to sign as witnesses in his presence and in the presence of each other.

f. The wishes of the testator should be fully and clearly expressed in the will.

g. No exact form of words is necessary to make a will.

h. In writing wills simple language should be used. Statements concerning every provision or condition of the will should be fully and plainly made.

i. A will is good, though written with a lead pencil.

j. A will to be effective in matters pertaining to real estate must be executed according to the laws of the state in which the real estate is located. This requirement is generally in regard to the number of witnesses to a will. Care should be exercised to dispose of all the property belonging to the person making a will. In order to accomplish this a will should have a clause, "all the rest, residue and remainder of my estate, I give" etc., or "all the rest, residue and remainder of my estate shall be divided into the following parts, 1/3 to..... 1/6 to.....," etc.

k. Personal property may be conveyed in accordance with the law where the testator resides.

l. If trust provisions or limited estates are to be provided for in a will, it is best to have the will drawn by a competent lawyer, as these provisions are very technical, and afford many contests and litigation if not carefully drawn.

m. While in some states a person does not need to give his property or any part of it to his children, yet in some states the names of all the children must be mentioned in the will to show competency of the testator.

5. **Codicils.**—The same principles apply to a codicil as to a will. It must be published and signed in the presence of witnesses.

6. **Married Women.**—The wife is entitled to a certain portion of her husband's property called **dower.** If the will does not provide that amount for her she can have it set aside and claim her dower right.

7. **When is a Will Set Aside?—**
   a. When it can be proved that the testator was feeble minded or lacking in mental capacity.
   b. When the testator revokes it before death. It is usually destroyed.
   c. When the property devised has been disposed of during the testator's lifetime.

8. **General Principles:—**
   a. Any person may be a devisee or a legatee including married women, minors and corporations.
   b. Testator's property is primarily liable for testator's debts and funeral expenses, which must be paid before any part of it can be distributed to legatees.
   c. A will has no force or effect until after testator's death.
   d. The last will annuls all former wills.
   e. A will takes effect from the day of the testator's death.
   f. All matters pertaining to wills and inheritances are handled by the Court having probate jurisdiction.

## Form of a Will

I, ....., of the city of....., County of....., and State of....., being of sound mind and memory, do make, publish, and declare this to be my last will and testament, to-wit:

First—All my just debts and funeral expenses shall be first duly paid.

Second—I give, devise and bequeath all the rest, residue and remainder of my estate, both real and personal, to my beloved wife,....., to have and to hold to her, my said wife, and to her heirs and assigns forever.

Third—I nominate and appoint my said wife, ....., to be the executrix of this my last will and testament, hereby revoking all former wills by me made.

In witness whereof I have hereunto set my hand and seal this..... day of....., A. D. 19....

.....(Seal)

Signed, sealed, published and declared as and for his last will and

testament by the above named testator, in our presence, who have, at his request, and in his presence, and in the presence of each other, signed our names as witnesses thereto.

(Signature)

A. B.
C. D.
E. F.

Most States require two witnesses.
Some States require three.

## Codicil to the Above Will

Whereas, I.....did on the.....day of..... 19...., make my last will and testament, I do now by this writing add this codicil to my said will, to be taken as part thereof.

I give, and bequeath unto my friend.....his heirs and assigns the sum of $1000.00.

In witness whereof I have hereunto set my hand and seal this..... day of..... 19....

.....(Seal)

Signed, sealed, published and declared as and for a codicil to be annexed to his last will and testament by the above named testator, in our presence who have at his request, and in his presence, and in the presence of each other, signed our names as witnesses thereto.

(Signature)

.....
.....
.....

## A Model Will

The will of the late Chief Justice White of the United States Supreme Court was a model of clarity and brevity. It is one of the shortest wills on record and yet it contains all the essentials.

This is my last will. I give, bequeath and devise to my wife,..... ....., in complete and perfect ownership all my rights and property of every kind and nature, whether real, personal or mixed. wherever situated, appointing her executrix of my estate without bond and giving her seisin thereof.

Signed

.....

Witness

.....
.....
.....

## Information for Executors and Administrators

An executor is named in a will to execute that will and settle the estate. If the will does not name an executor, or if named, he will or cannot act, the Probate Court (some states Surrogate, others Orphans' Court) appoints an "administrator with the will annexed." If a person dies without leaving a will the court appoints an administrator, whose duty is the same as that of an executor, except that he, having no will of the deceased, distributes the property as the law directs.

The duties of an executor are: First: To see that the deceased is suitably buried, avoiding unreasonable expense

if the estate is insolvent. Second: To offer the will for probate, or proving; to conform to the laws of his state and rules of the court, the clerk of which will give full instructions. Third: To make and return to the court within required time an inventory of the property. "Real estate lying in another state need not be inventoried, for that must be administered upon in the state where it lies; but personal property situated in another state should be inventoried." If the real estate is encumbered, it should be described. Fourth: To collect the property, pay the debts and dispose of the remainder as the law and will, or either, directs. Generally the debts should be paid as follows: 1. Funeral expenses. 2. Expenses of last sickness. 3. Debts due the United States. 4. Debts due the state. 5. Claims of creditors. Fifth: To render the accounts as directed by the court.

The law provides that the widow of the intestate shall be first entitled to act as adminstrator; next, the nearest of kin who are competent; next, any creditor who will accept the trust; and lastly, any other suitable person.

Executors and administrators are required to take an official oath; also to give bond, which is usually for double the amount of the estate.

Generally speaking any blanks for probate may be secured from the clerk of the court having probate jurisdiction.

### A Last Will*

He was stronger and cleverer, no doubt, than other men, and in many broad lines of business he had grown rich until his wealth exceeded exaggeration. One morning, in his office, he directed a request to his confidential lawyer to come to him in the afternoon—he intended to have his will drawn. A will is a solemn matter, even with men whose life is given up to business, and who are by habit mindful of the future. After giving this direction he took up no other matter, but sat at his desk alone and in silence.

It was a day when summer was first new. The pale leaves upon the trees were starting forth upon the yet unbending branches. The grass in the parks had a freshness in its green like the freshness of the blue in the sky and of the yellow of the sun—a freshness to make one wish that life might renew its youth. The clear breezes from the south wantoned about, and then were still, as if loath to go finally away.

*This bit of prose poetry is reproduced by permission of the author, Williston Fish.

Half idly, half thoughtfully, the rich man wrote upon the white paper before him, beginning what he wrote with capital letters, such as he had not made since, as a boy in school, he had taken pride in his skill with the pen:

### In the name of GOD, Amen

I, CHARLES LOUNSBURY, being of sound and disposing mind and memory [he lingered on the word memory], do now make and publish this my last will and testament, in order, as justly as I may, to distribute my interests in the world among succeeding men.

And first, that part of my interests which is known among men and recognized in the sheep-bound volumes of the law as my property, being inconsiderable and of none account, I make no account of in this my will.

My right to live, it being but a life estate, is not at my disposal, but, these things excepted, all else in the world I now proceed to devise and bequeath.

*Item:* And first, I give to good fathers and mothers, but in trust for their children, nevertheless, all good little words of praise and all quaint pet names, and I charge said parents to use them justly, but generously, as the needs of their children shall require.

*Item:* I leave to children exclusively, but only for the life of their childhood, all and every the dandelions of the fields and the daisies thereof, with the right to play among them freely, according to the custom of children, warning them at the same time against the thistles. And I devise to children the yellow shores of creeks and the golden sands beneath the waters thereof, with the dragon-flies that skim the surface of said waters, and the odors of the willows that dip into said waters, and the white clouds that float high over the giant trees.

And I leave to children the long, long days to be merry in, in a thousand ways, and the Night and the Moon and the train of the Milky Way to wonder at, but subject, nevertheless, to the rights hereinafter given to lovers; and I give to each child the right to choose a star that shall be his, and I direct that the child's father shall tell him the name of it, in order that the child shall always remember the name of that star after he has learned and forgotten astronomy.

*Item:* I devise to boys jointly all the useful idle fields and commons where ball may be played, and all snow-clad hills where one may coast, and all streams and ponds where one may skate, to have and to hold the same for the period of their boyhood. And all meadows, with the clover blooms and butterflies thereof; and all woods, with their appurtenances of squirrels and whirring birds and echoes and strange noises; and all distant places which may be visited, together with the adventures there found, I do give to said boys to be theirs. And I give to said boys each his own place at the fireside at night, with all pictures that may be seen in the burning wood or coal, to enjoy without let or hindrance and without any incumbrance of cares.

*Item:* To lovers I devise their imaginary world, with whatever they may need, as the stars of the sky, the red, red roses by the wall, the snow of the hawthorn, the sweet strains of music, or aught else they may desire to figure to each other the lastingness and beauty of their love.

*Item:* To young men jointly, being joined in a brave, mad crowd, I devise and bequeath all boisterous, inspiring sports of rivalry. I give to them the disdain of weakness and undaunted confidence in their own strength. Though they are rude and rough, I leave to them alone the power of making lasting friendships and of possessing companions, and to them exclusively I give all merry songs and brave choruses to sing, with smooth voices to troll them forth.

*Item:* And to those who are no longer children, or youths, or lovers, I leave Memory, and I leave to them the volumes of the poems of Burns and Shakespeare, and of other poets, if there are others, to the end that they may live the old days over again freely and fully, without tithe or diminution; and to those who are no longer children, or youths, or lovers, I leave, too, the knowledge of what a rare, rare world it is,

WILLISTON FISH

SECTION 2

# Safety First or First Aid to the Bank Balance

How to Detect Counterfeit Money — How to Avoid the Swindler—How to Protect Your Bank Balance — How to Safeguard Your Heirs — How to Save Money in the Home — How to Save Insurance Premiums—How to Avoid Bad Investments — How to Avoid Business Depression—How to Reduce Taxes — How to Avoid Loss in Bad Debts—How to Avoid Loss in Shipping—How to Avoid Postage Loss

## EXPLANATION

THE success or failure of a work of reference depends upon its practical value....what it is worth in dollars and cents. This department of the Business Guide sets forth the various ways in which modern men and women are being swindled, exposes the amazing carelessness and ignorance which makes these losses possible, and presents tested and approved plans for making more money, and saving more money. On these three points its claims of practical value are based.

## HOW TO DETECT COUNTERFEIT MONEY

**1. Definitions.**—**A counterfeit** is a fac-simile of the genuine, or made as nearly like it as possible. **A spurious note** is different in design from the genuine and is calculated to pass where the genuine is not known. **An altered note** is one altered from a lower to a higher denomination. **Piecing** is done by making ten notes or bills out of nine by cutting a counterfeit note into ten pieces.

**2. Circulation.**—Counterfeiting has its good and bad seasons. During the war the high price of metals prohibited the manufacture of spurious coins. High wages in war time industries lessened the incentive. Now, as we are returning to normal conditions there has appeared what is known as a "normal circulation."

**3. Fifty-Four Varieties of Bank Notes.**—It is doubtful if many people realize that in all there are fifty-four different designs of various denominations in our paper currency.

| Denomination | Kinds | Denomination | Kinds |
|---|---|---|---|
| $ 1.00 | 5 | $ 100.00 | 6 |
| 2.00 | 5 | 500.00 | 4 |
| 5.00 | 6 | 1,000.00 | 5 |
| 10.00 | 7 | 5,000.00 | 1 |
| 20.00 | 7 | 10,000.00 | 2 |
| 50.00 | 6 | | |

Naturally this makes counterfeiting easy and treasury officials should reduce the variety. All notes of the same denomination should be printed the same color with a distinct color for each denomination. There would then be no possibility of raising a note of low denomination to a higher one.

Under the present system Uncle Sam is the counterfeiter's best friend and ally.

### How to Detect Counterfeit Bills

**4. Silk Threads.**—There are two groups of silk threads running up and down a genuine bill, one on the right side, the other on the left. As a sure test, hold the bill up to the light. No counterfeiter has ever been successful in putting in the silk threads and imitating the genuine bill in this respect.

**5. Portraits.**—See that the portraits are good, and notice that the pupil and the white of the eye show distinctly. Then see that the sky and water are clearly transparent. In counterfeit notes the pictures are always poor and the sky, water, etc., look scratchy and irregular.

**6. Ink.**—The ink used in genuine notes is very difficult to imitate. It gives a clear, glossy expression, while counterfeiter's ink looks dull, smutty, and muddy.

**7. Paper.**—The paper of a counterfeit is always of an inferior quality, while the government has the best and most perfect system of manufacturing the highest grade of paper.

**8. Medallion Rulings.** — Examine the medallion rulings and circular ornaments around the figures with a microscope, and see if they are regular and in all parts mathematically exact. This is done by a machine that costs from $75,000 to $150,000, and consequently is beyond the reach of counterfeiters. Engravings by hand can never imitate this work. These medallion lines or rulings can be traced by means of a line through the figures, never breaking or losing itself in another line. In counterfeit it is always broken and irregular.

**9. Altered Notes.**—Notes are altered by raising the denomination by taking out the genuine with acid and printing in a higher denomination with a counterfeit die. They

can be easily detected by the stain which the acid produces when the figures are taken out.

**10. The Pasting Process.**—Bank notes that have been altered by what is called the "pasting process" can be detected by holding them to the light. The parts pasted on will then be easily discovered. If any alteration has been made by substituting letters or figures for others that have been erased, the denomination in the center of the note, if carefully examined, letter by letter, will be found to be blurred and improperly formed, and the parallel lines irregular and imperfect.

**11. Federal Reserve Notes** are easily altered and raised, but they also carry on their face an extremely simple means of detection. George Washington's picture appears on the $1.00 note, Thomas Jefferson's on the $2.00, Abraham Lincoln's on the $5.00 and Grover Cleveland's on the $10.00. Naturally the smaller bills are the most commonly raised and it is easy to remember that no Federal Reserve Note bearing the portrait of either Washington or Jefferson is worth more than $2.00.

### Rules for Detecting Counterfeit Coins

**12. Sound.**—A counterfeit coin may sometimes be detected by its dull sound when thrown upon a counter. Some fake coins ring true but are so brittle that they are easily broken.

**13. Size and Weight** are additional tests. A suspicious looking coin should be compared with a genuine one.

**14. Touch.**—All counterfeit coins have a greasy feel when rubbed between the finger and thumb.

**15. The Acid Test** consists in using a strong solution of nitric acid (6½ parts) muriatic acid (¼ part) and water (5 parts). When applied to a scratch on the edge of a spurious coin the color will instantly change. If the acid has no effect the coin is genuine.

**16. Milling.**—The edges of counterfeit coins are usually imperfect.

**17. Sweating, Plugging and Filling** are methods used to debase coins, and the simplest tests are peculiarities in size, weight and appearance.

## HOW TO AVOID THE SWINDLER

1. Swindlers have been with us since the beginning of the world. There has always been someone willing to take advantage of carelessness and ignorance and there always will be. We laugh at the victim of the old fashioned con game and gold brick artists, yet the same schemes, brightened up a little in new clothes are being worked just as successfully today.

2. **Three Practical Rules to Remember:—**

   a. Never sign a paper of any kind for a stranger, unless he can prove that his business is legitimate and that he is acting within the limits of his authority.

   b. Never try to beat a swindler or a sharper at his own game.

   c. Sign no paper without reading it and understanding it.

3. **The Swindling Note.**—There is a fundamental rule of law which provides that even a fraudulent note is good if it is in the hands of an innocent third party. Thus if A gets B to sign a paper which afterwards turns out to be a promissory note, B can be forced to pay the note to an innocent purchaser. Here is an example of a swindling note:—

*Naperville, Ills., Oct. 20, 1923.*

14 *One year after date, I promise to pay Fred J. Davis or bearer Ten Dollars, when I sell by order Four Hundred and Seventy five Dollars ($475.00) worth of Victory Radio Outfit: for value received, at ten per cent. per annum. . . . . Said ten dollars when due is payable at Naperville, Illinois.*

*C. E. Selby, Agent for Fred J. Davis.*

*Witness: M. J. Moyer.*

Mr. C. E. Selby signed this contract thinking that he was securing the agency for Victory Radio Sets. He merely agreed to pay Fred Davis the sum of $10.00 after he had sold a certain number of the outfits. He didn't read the paper carefully enough to notice that these last five or six words in each line could be torn off and destroyed in this manner:

bearer Ten Dollars, when I sell by
worth of Victory Radio Outfits
Said ten dollars when due is
Agent for Fred J. Davis.

leaving a perfectly good promissory note for $475.00:—

One year after date, *I promise to pay Fred J. Davis* **or** order Four Hundred and Seventy-five Dollars ($475.00) for value received, at ten per cent. per annum..... payable at Naperville, Illinois.

C. E. Selby,

Witness: M. J. Moyer.

This note when sold at a bank becomes the property of a third and innocent party, and at the end of the year Mr. Selby is obliged to pay it.

NEVER SIGN A PAPER FOR A STRANGER

**4. Counterfeit Money Swindle.**—This is a shrewd method of blackmailing and is worked as follows: The swindlers arouse the interest of their intended victim by stories of the fabulous fortunes to be made by passing counterfeit money. To convince him they give him a genuine bill which, of course, is easily passed. He is persuaded to sign a document admitting him into a secret society, membership in which entitles him to receive an unlimited amount of the counterfeit bills at a trifling cost. As soon as his signature is secured, a hitherto unknown member of the gang represents himself as an officer of the United States, produces the damaging document, and pretends to place him under arrest. The victim is usually glad to pay from $100.00 to $2000.00 rather than suffer the disgrace of arrest and the humility of having his predicament made known.

**5. The Barb-Wire Swindle.**—The "Wire Fence Man" is a new swindler working the farmers. The scheme is a shrewd one and is executed as follows: A nicely dressed man, very pleasant in his manner, meets the farmer in his field or at his home, and desires the privilege of exhibiting his wire fence stretcher machine, for which privilege he will build

the farmer thirty or forty rods of good fence for exhibition. All the agent asks is board while he is at work on the fence, with the understanding that the farmer is to go after the machine at the nearest depot and pay the charges, not to exceed $3 for the fence, all set up where he wants it. In order to have everything understood, and as a warrant of the farmer's good intentions, he requires him to sign a written order on a postal card, which he mails (as he says) to his partner, which proves to be a written contract for the machine, price $200 (worth less than $25). After the machine comes, a new man turns up with the postal order for the machine and requires the payment of $200 as per agreement on the card. He claims to be an attorney for the company and threatens to sue in the highest courts until he secures the payment of the order.

6. Similar Swindles.—An affable stranger may offer you big commissions if you will sell some farm machinery he stores in your barn. He may offer to erect a patent fence or a windmill or a lightning rod at a ridiculously low price, provided you will agree to act as his agent. Merely as a matter of business (?) and just to have everything understood (?) you are requested to sign a lengthy agreement, specifying the terms under which the agency is to be carried on. If you read and understood a document of this kind you would never sign it, but many are led on by the certainty of future profits. At the end of thirty days you discover to your astonishment that the contract has been altered in such a way that you are legally bound to pay an exhorbitant price.

**7. Warning.**—It is always a simple matter to find out something about the character of the people with whom you are doing business. Before you make a contract of any kind with a strange firm, consult Dun or Bradstreet, or ask your banker to make an investigation for you.

**8. Fakers.**—Any large gathering of people is a Mecca for fakers and gamblers of all kinds. The three card monte trick and the shell game are the oldest and of course the best known. The players are slight of hand performers and it is impossible to beat a gambler of this type at his own game. In auction sales of cheap jewelry, the auctioneer openly stuffs a $20.00 bill into a dollar watch and sells it (at a sacrifice) for $10.00. The trusting purchaser discovers to his sorrow that his eyes had deceived him. In other games the faker has a box filled with envelopes, each envelope containing a number to correspond with numbers in a show case. The hopeful purchaser pays his dollar and selects an envelope. Most of the envelopes contain but one number which entitles the holder to one of the brass or silver washed prizes, worth but two or three cents each. But if a winning number is actually drawn, the envelope will contain two numbers, and it is hardly necessary to state that the unlucky number is the one shown.

**9. Cappers.**—In all these games, cappers are very extensively employed. A capper is a green, ignorant appearing man who wins large sums of money, or valuable prizes to draw others into the game. He buys a watch and shows the customers the $20.00 bill it contained. He never pulls an unlucky number. He is there to show you how easy it is to win, but you have only yourself to blame if you take his word for it and find out for yourself how easy it is to lose.

**10. The Matrimonial Agency.**—There is a certain type of publication whose pages are literally cluttered up with fake matrimonial advertisements. Here is an explanation of their methods. The inspired proprietor makes the necessary arrangements with a young woman, and places a sum of money to her credit in the bank. He then inserts the following advertisement in every paper willing to accept it:—

> Beautiful young widow having $3000.00 cash would remarry. Only those who are qualified to handle finances successfully need apply.
> The Cupid Matrimonial Agency.

It is needless to say that countless men and boys are ready and willing to assume the role of husband and protector to this charming widow, and to invest her surplus funds. Each applicant receives a letter to the effect that the widow is very much pleased with his qualifications. He is urged to write again enclosing $2.00 for a photograph and to cover the fee of the agency. Once the fee has been received the widow writes regretting that she has changed her mind and decided to marry the man from Oshkosh.

**11. The Marriage Certificate Swindle.**—This scheme is founded on the theory that all the world loves a lover. The scheme is simple but profitable. A man and woman hurriedly drive up to a farmer's house in search of a minister. From their flurried manner and their coy looks it is evident that they are eloping, but as there is no preacher within five miles, they are up against it. Just at this point the elopers' partner drives slowly by dressed as a country preacher. He is persuaded to marry the couple, the farmer and his wife sign as witnesses without reading the document, and at the end of thirty days are called upon by their bank to pay a note for $500.00.

**12. The Marked Bill Swindle.**—The swindler purchases a small item in the store of his intended victim, first carefully noting the number of the $10.00 bill he tenders in payment. A few minutes later his partner enters the store and makes a similar purchase laying down a one dollar bill. He picks up the change, counts it, starts for the door, then hesitates and asks: Didn't I give you a $10.00 bill? The storekeeper is quite positive. So is the purchaser. He remembers the bill because it was a nice new one and he even remembers the number of it. By this time an interested crowd has gathered around. When the bill is actually found in the merchant's cash register, there is nothing for him to do but give up nine of his hard earned dollars, thus doubling the working capital of the swindlers.

**13. Street Workers.**—The means by which the street faker gathers in his unearned increment of dollars are many and varied. He may offer you Whosus' Bitters, a guaranteed cure for rheumatism, lumbago, eczema, cancer, headaches, liver trouble, impotence, constipation, summer complaint, tuberculosis and mumps, all for the sum of sixty-nine cents. Probably it is distilled water with a little something added

to give it color and odor. Or he may have the most sensational article ever offered the public in a combination egg beater, monkey wrench, tire tool, jack knife, nail file, meat grinder and potato masher all for the insignificant sum of fifty cents. Before you realize how badly you have been taken in he is gone forever.

**14. The Fake Detective Swindle.**—O'Henry tells of a crooked mayor who was beaten at his own game. He refused to grant a license to a medicine show because he himself had a monopoly on the local medical business. The swindler's partner represented himself to be a detective and conspired with the mayor to get the goods on the medicine man. The mayor feigned illness and called in the medicine man to effect a cure. After the treatment he paid the bill with marked money, the detective stepped in, placed him under arrest, seized the money and retained it for evidence. Some days later the mayor suddenly came to the conclusion that he had been swindled. Both doctor and detective had gone.

**15. Beggars.**—"For more than twenty years I have been in daily contact with beggars on the streets of greater New York. I have arrested, investigated, and talked with thousands of mendicants. Looking back on it all I must confess that I have yet to uncover a single deserving case." This is the extraordinary statement of John D. Godfrey, Mendicant officer for the Brooklyn Bureau of Charities.—American Magazine October, 1922.

**16. The Profits of Begging** are simply amazing. A capable beggar takes in from $15.00 to $100.00 a day and rarely devotes over three or four hours to his work. Think of that when next you are tempted to toss a coin to some deserving cripple. If he were an able bodied man in real hard luck he would patronize the bread lines or find opportunity to work for his meals. If he is disabled there are charity organizations in every city willing to take care of him, provide an artificial limb, teach him to use it, and find employment for him. If a man is out on the street asking for alms, he is there because it is the easiest way in the world to make his living.

**17. Kind of Beggars.**—A **"panhandler"** is a poorly dressed individual who walks along beside you on the street telling a hard luck story and asking for a dime to get a cup of

coffee, or a sandwich. A **"tramp"** uses the same tactics in the country districts. A **"flopper"** is a beggar who has lost the use of one or both legs. A **"throwout** is one who fakes paralysis. A **"high heeler"** is a woman who wears an ugly

THERE ARE THOUSANDS OF ROBBERS WHO NEVER USE A JIMMY OR BLACK JACK.

brace on her foot giving her the appearance and the gait of a cripple. A **"blackhood"** is an old lady who sits on a camp stool with a crying baby in her lap and a tin cup in her hand. A **"fit thrower"** pretends to have fits or to faint from hunger.

**18. Publishing Fakes.**—The number of people who have literary aspirations is astonishingly large. Certain firms

and individuals who have discovered this human trait have found a way to cash in on it. They run an advertisement something like this:—

> BIG MONEY IN WRITING photoplays, stories, poems, songs. Send today for free Writer's Text Book, full of helpful advice how to write and where to sell.

If you believe that you have latent talent of this kind you will answer this little ad and in the course of a few days you will get a book of instructions telling you how to make your fortune in literary circles. In the course of time you write a story or a song, or a photoplay and submit it to the publishers for free examination and criticism. Back comes a form letter, mind you, to the effect that there are great possibilities for your story or song or photoplay and that if you will send a certain sum of money, your work will be published at once or sold on a commission basis to some publisher or producer. Exactly the same letter is sent out no matter how good or how bad the work may be. The fees range from $10.00 up to $75.00 for typing and correcting the manuscript, or writing the music for a song, or selling the production to a publisher, whatever the agreement may be. Nothing is guaranteed in the contract, but the writer is led on by the hope of fabulous profits. Beware of these promoters. They will get your money and you will get nothing in return but experience.

**19. Wild Cat Stocks.**—The Federal Trade Commission estimates that a billion and a half dollars are stolen every year from the investing public by so-called financiers. Think of it, a billion and a half dollars in worthless securities. In this way enough money is lost annually to pay off the National debt in a very few years, both principal and interest. This same amount of money turned into legitimate trade channels would make business boom in the United States, create new wealth and open up jobs for workmen. When you stop to think that in addition to the loss on these crooked schemes, the investing public throws away every year a still larger sum on oil, mining and promotion stock of various kinds which are perfectly legal, you begin to get an idea of the tremendous profits in this business. Don't be satisfied to think twice before you act. Think two hundred times and investigate every angle of the scheme and

the men behind it before you invest. The promoters have everything to gain and nothing to lose. You have everything to lose and nothing to gain in a fraudulent or speculative venture.

**20. Mail Order Swindles.**—"We start you in the mail order business" is a familiar display head in many advertisements. Answer the advertisement and you discover with delight that here at last is an honest man who is going to make you rich. All you have to do is send him $25.00, $50.00 or $100.00 for certain schemes, formulae, mailing lists, stock in trade and full instructions for making a fortune in the mail order business. But once you part with your money you receive a shoddy assortment of merchandise and a worn out or fake trade secret, and you can repent of your folly at leisure. Mail order employment bureaus come in the same class. Suppose you are out of a job and an out of town agency sends you a letter listing hundreds of attractive positions they have open. "Send us $1.00 now" they say, "and the balance after you go to work." Wouldn't you be tempted to take a chance on a fair and square offer of that kind? Don't be deceived. The first dollar is all the agency wants. You will never be bothered about making the other payments because if you get a job it will be the result of your own efforts.

**21. Fake Wholesale Grocers.**—Certain mail order grocers have recently made huge fortunes hoodwinking the public. They advertise sugar, flour, soap and other staples at greatly reduced prices, but in order to make this tremendous saving it is necessary for you to purchase the whole list of goods advertised. Thus, to save three or four cents on a pound of sugar or a cake of soap you must pay ridiculously high prices for a new brand of extracts, baking powders and spices. When you open up the package you find the cheap staples all right unless the supply is temporarily exhausted, but you also discover that you have paid out four or five times as much money as the shipment is worth.

**22. Medical Swindles.**—The American public spends about one hundred million dollars annually for patent medicine. That statement sums up one of the most gigantic swindles ever attempted upon an intelligent public. The American Medical Association has published a book in which they take up each nationally advertised nostrum in order. Catarrh

remedies which contain dangerous drugs, soothing syrups which injure the health of infants, laxatives which enslave the user, headache powders which endanger life, mineral waters which are mineral in name only, dangerous home remedies for the treatment of venereal diseases, and tonics which develop a craving for alcoholic stimulant, and hundreds of similar remedies were exposed in this book. It showed that the average alcoholic content is about 25% in these remedies and that poor health and death itself were their inevitable result. It proved that half of the printed testimonials were paid for, that many were faked, and that the others were written by people willing to sign anything to get their names in print. As an example we cite the case of a man in Indiana who died of kidney trouble. Over a year after his death the manufacturer of a certain kidney medicine was using his picture and testimonial in all his advertising. In spite of these and countless other warnings the patent medicine business is growing day by day, and year by year. From the other side of the fence there is often voiced a criticism of the whole medical profession. Oculists who prescribe glasses when none are necessary, surgeons who resort to the knife on the slightest provocation, and practitioners who accept large fees for curing imaginary ailments are largely responsible for this feeling. There are unscrupulous individuals in every line of endeavor and it pays to be on the watch for them.

**23. Wanted New Faces for the Movies** is an advertisement that has brought home thousands of unearned dollars to unscrupulous promoters. All you have to do to get into the movies is to send on $5.00 or $10.00. Your photograph is then printed in a portfolio or magazine which is supposed to circulate exclusively among motion picture directors who are always on the lookout for new faces. "It is fascinating work; the pay is big; and no experience or training is necessary," so reads the propaganda. "All we ask is one-half of your first week's salary of $500.00 or $1000.00." Sounds attractive, doesn't it, and yet all the advertiser ever hopes or expects to get is the original payment.

**24. One Sided Contracts.**—It is a regrettable fact, but none the less true, that numerous firms are making money through the use of an unfair or one sided contract. Let us see how they operate. Here, for example, is a New York manufacturer (so called) who sells his product on the

exclusive territory plan, assigning certain large districts or territories to individual salesmen. He requires the salesman to guarantee a certain volume of business and to put up a substantial deposit in cash to bind the agreement. The product not being readily salable, the salesman falls down on his contract and forfeits the deposit. The manufacturer then hunts up another representative with some ready cash and resells the rights. Or again we find certain agency houses which guarantee that the salesman's commission over a period of months will equal a specified sum of money. A complete settlement and payment of any deficiency is to be made at the expiration of the contract. In the meantime the salesman is allowed a liberal commission but is required to pay cash for all goods ordered. A few weeks before the time is up the saleman's record is checked up. If he has not been making good on his agreement he is suddenly ordered over into California or up into Maine to finish his work. In indignation he gets out his contract and discovers to his chagrin that he must either travel a long distance at his own expense or violate the terms of his agreement. Similar one sided contracts are drawn up and signed every day.

25. **Correspondence Schools.**—A vast amount of good has been accomplished by the correspondence schools in this country. Young men and women who were denied the privileges of college training have been able to get a liberal education or prepare for a better position by courses of home study. However, even this field is not safe from the swindler. He has organized fake detective schools, schools of science, literature, art, salesmanship, and courses of special instruction covering every phase of human endeavor. Earn while you learn is the great slogan. They have been exposed time and time again, but they still continue to get the money without giving any real value in return. A young man who wants to take up a course of mail instruction ought to make a careful investigation of the school and to be sure that he will get his money's worth. The tuition in a reliable school is frequently lower than that of its unworthy competitor.

26. **Home Work.**—A great many people have a desire to increase their earnings by doing work at home after business hours. This is particularly true of women whose husbands are not able to earn enough to provide the luxuries of life. Knowing this to be the case the swindlers are al-

ways ready to help. For the small sum of $1.00 one man offers to send a list of reliable (?) firms who pay well for home work, such as addressing envelopes, sewing, fancy work, mailing circulars, etc. He is in the same class with the mail order employment bureau. All he wants is the dollar. Another sells an outfit for $5.00 which is supposed to enable you to do certain ornamental decoration on pillow tops, tidies, and pin cushions, and he assures you that your output will always be in demand at high prices. And still another persuades you to part with fifty or a hundred dollars for a knitting or weaving machine, which you are led to believe will pay for itself in thirty days and then provide you with a big income for the rest of your life. It is only after the money is hopelessly gone that you discover how worthless the machine really is and how slim your chances are of ever making any money with it. These sharks prey on the unsuspecting public, on women and children who can little afford to lose their hard earned cash. Boys and girls sell countless packages of worthless stick pins, washing powders, or post cards and receive in return a shoddy premium of little if any real value. Beware of these new schemes where science is baffled and thousands are growing rich over night. Invariably there is an unsuspected joker in the deck, and inevitably there is some cash to pay out first.

27. **Gasoline Pumps.**—In some States the gasoline pumping stations are subject to state inspection. In others your chances of getting fair measure are about one in ten. Out of 187 pumps inspected in a western city only five were found to be correct. Fifteen gave extra measure and 171 were condemned. Whether this situation is due more to carelessness than to deliberate intent is a question, but it is just another indication of the losses which confront us on every side.

28. **One Born Every Minute.**—And so we might go down the list. Yesterday we had the pocket size gold brick, the shell game and the lost gold mine; today we have the fake income tax collectors, the crooked lobbyists and the salesmen who sell us worthless land and stock; and tomorrow we shall see the same old gags worked in the same old way, on the same old gullible public. The newspapers inform us that just recently a gentleman from Iowa paid $2100 for a half interest in the Washington Monument that

someone else paid a few hundred for the Grant Park Monument in Chicago, and that the riparian rights for all of San Francisco Bay were sacrificed at $4500.00. People are looking for easy money, and their free and easy manner of hunting for it, makes easy marks out of them.

29. Who is to Blame?—Are not the newspapers and magazines who print the fraudulent advertisements largely to blame for the sorrow and the heartaches which follow in the path of the swindler? Are they not in effect partners in the Crime? A publisher who does not take the trouble to look up the record of his advertisers or who is unwilling to stand behind everything sold thru his columns is violating his duty to his readers. Here surely we can place a part of the responsibility. Much of it must be laid at the door of ignorance as manifested by an unwarranted confidence in the sincerity and honesty of the whole human race. And finally, let us not overlook the great underlying principle in practically every big swindling scheme, namely the desire to get something for nothing. The most successful swindler swindles his victim by first arousing in the mind of that victim a desire to swindle someone else.

30. Useless Warnings.—In bringing this chapter to a close let us call your attention to an amusing incident which occurred recently in a small western community. The local Banker received a circular describing a plainly fraudulent undertaking and seeking to enlist subscriptions for the capital stock. In the belief that he could do a real service to his patrons he posted up the circular in the Bank window and in his own handwriting wrote on the margin "This is a good example of a fraudulent stock selling scheme" and signed his name. Soon a crowd gathered at the window, men, women, and children rushed into the bank offering to draw out their savings and purchase stock in the new company, and the Banker was compelled at last to take down the circular in self defense. His warning was futile. Perhaps ours will be as well. But we have done our best to show the folly of trying to beat a swindler at his own game, of signing a paper for a stranger or of signing anything without reading it and understanding it.

## HOW TO AVOID BANKING LOSSES

**1. Explanation.** — Under a Banking System in the United States where hundreds of millions of dollars change hands every day, it is only natural that huge losses occur. Some of them are direct—actual monetary losses in dollars and cents. Others are indirect resulting in the loss of reputation, the lowering of credit standings, or the inability to grasp an opportunity when it presents itself. All of them could be prevented.

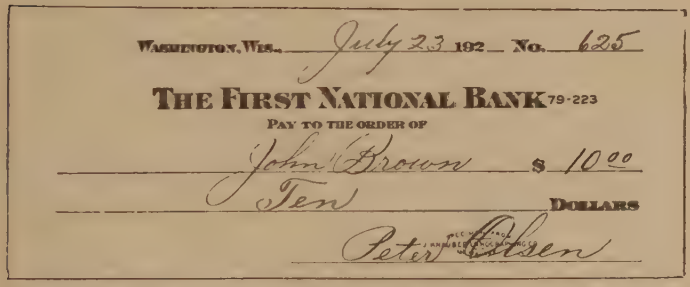
**2. The Banker's Loss.**—On account of the carelessness, ignorance, or incivility of its officers, a bank may lose friends and customers. Every bank has its overdrafts. Every bank has its past due paper. Every bank has a certain amount of real or personal property it has been compelled to accept in lieu of cash. But it is not of these losses we would deal. They are the inevitable result of circumstances—bad management, poor judgment or dishonesty on the part of someone in the institution. The losses that count are the ones which affect you and I as plain citizens in our every day transactions with banks and bankers.

**3. The Cause of Bank Losses.**—These losses are of two kinds: those due to our carelessness and those resulting from our ignorance of ordinary banking laws and customs. If every individual was as careful about money matters as he should be, and if he knew and understood the fundamental principles of money and banking, this chapter could remain unwritten.

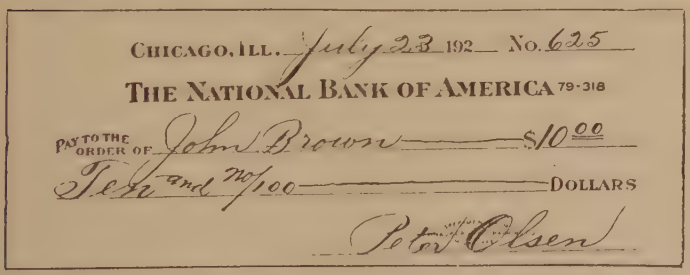
**4. Losses Due to Carelessness.**—Let us consider first of all the careless things people do in connection with their banking business. How do they write checks, how do they endorse them? How do they handle cancelled vouchers? What about overdrafts? Why is it that some people have no bank

account whatever? These and countless other questions must be considered if we are to avoid an apalling yet wholly unnecessary loss. The following illustrations bring out the points we wish to emphasize.

**5. Carelessness in Writing Checks.**—Every banker knows that at least 50% of the checks passing through his hands could be raised or altered by the clumsiest amateur. The only reason that more of them are not changed is because there are not more dishonest people in the world. Millions of checks are written every year which could be changed as easily as a fourteen year old boy could raise the following check from $10.00 to $110.00, by placing the figure 1 before the 10 and writing the words "One Hundred" in front of "Ten."


WASHINGTON, WIS. July 23 192 No. 625
THE FIRST NATIONAL BANK 79-223
PAY TO THE ORDER OF
John Brown $ 10 00
Ten DOLLARS
Peter Olsen

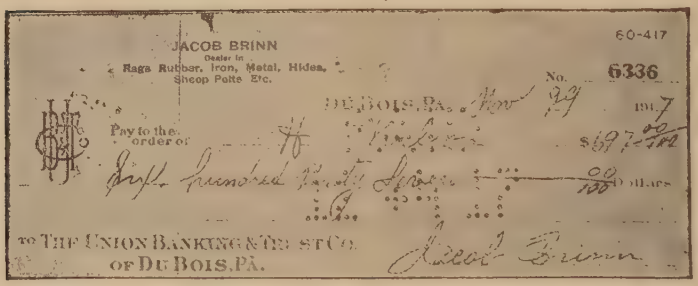
The same check properly written would appear like this:


CHICAGO, ILL. July 23 192 No. 625
THE NATIONAL BANK OF AMERICA 79-318
PAY TO THE ORDER OF John Brown $10 00
Ten and no/100 DOLLARS
Peter Olsen

**6. Carelessness Costs Millions.**—The annual loss through forgery and check raising is over fifty million dollars in the United States alone. Six years ago the loss was only twenty-five millions. This staggering increase is due to the con-

constantly growing use of the check and to the increasing skill and audacity of the crooks.

**7. Liability.**—Many persons believe that after making out a check payable to a firm or individual, writing in the amount and affixing the signature, that their responsibility ceases. But, sad to relate, such is not the law. One of the decisions of the Supreme Court of the United States reads: "Your bank is responsible for the signature on your check, but not for what is written in the body of the check, and money paid in good faith and without negligence on an altered check, cannot be recovered by the maker thereof." Espey vs Cinni Bank, 18 Wall, U. S. 118.

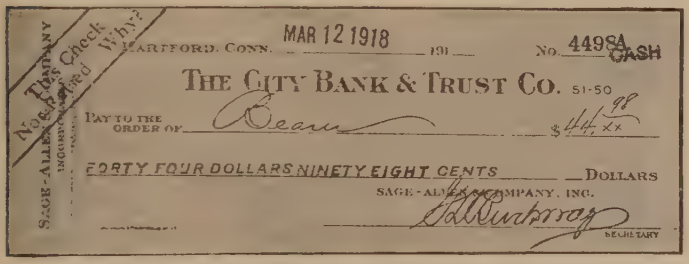



This check was lost in the mail. The finder got an auto salesman to endorse with him in order to make a deposit on a car. While standing in line waiting to get it cashed, he took out a fountain pen, and changed the amount from $197.00 to $697.00 which he got in cash.

**8. Blank Checks.**—It would be an insult to a man's intelligence if you suggested that he sign his name to a check without filling in the amount or the payee's name, and hand it to a stranger. And yet, that's exactly what the average man is doing today when he sends his unprotected check through the United States Mails. The mails have been robbed. Almost any daily newspaper will verify that statement. Unfortunately there are dishonest employees who have been found guilty of stealing letters from the incoming or outgoing mail. And in robbing the mails, the modern thief would rather find one unprotected check, than several hundred dollars in currency. Why? Because the check's

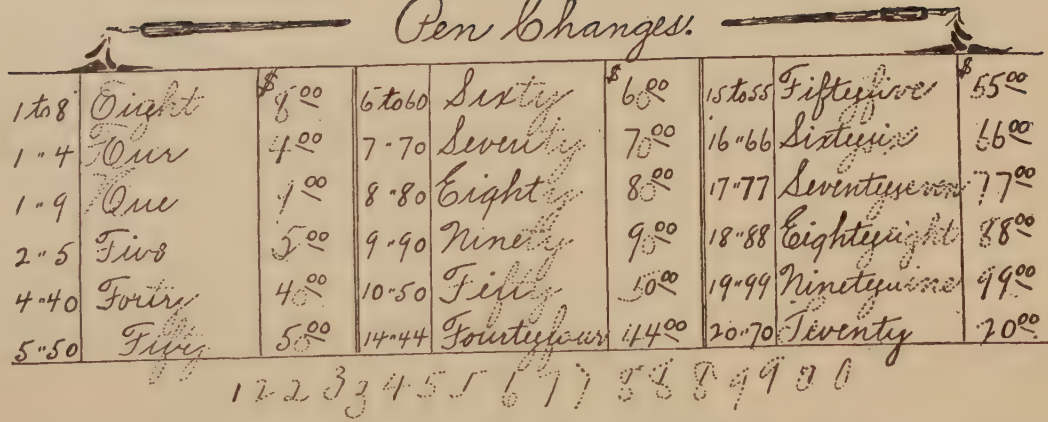
value is limited only by the present worth of the signer. Think of it! WHEN YOU WRITE AN ORDINARY CHECK YOU RUN THE RISK OF LOSING EVERY DOLLAR YOU OWN.

**9. The Crook's Methods.**—There are several methods by which a dishonest man can manipulate your check to his personal advantage. In the first place there are **the simple pen changes** which are illustrated on page 284. These are only a few of the many combinations that can be made by a careful study of the handwriting. For example, one to eight—one to eighty—one hundred to eight hundred —one thousand to eight thousand, etc. The employees of your bank are not mind readers and will consequently pay the check if there is no evidence of fraud.


No Tinting Chemical Used in this Check Will Fade the Writing
SAGE-ALLEN & COMPANY, INCORPORATED
HARTFORD, CONN. MAR 12 1918 191
No. 4498
CASH
THE CITY BANK & TRUST CO. 51-50
PAY TO THE ORDER OF
Dean
$44.98
FORTY FOUR DOLLARS NINETY EIGHT CENTS DOLLARS
SAGE-ALLEN COMPANY, INC.
SECRETARY

This check was stolen from the mail, the payees name was washed out and the face value stolen.

**10. The Acid Method.**—It is a comparatively simple matter to apply an acid and wipe off every written word or figure except the signature on a common white check. This acid is worth about 25 cents per bottle and may be found on any bookkeeper's desk. On colored checks the fine lines of the signature are covered up until after the acid bath leaving the check perfectly white. Any convenient name and amount may then be written in. Even when safety paper (so called) is used, checks are altered every day. The professional check raiser has considerable knowledge of chemicals enabling him to alter checks, drafts, letters of credit and registered bonds. He is also something of an artist. For instance, if the payee's name on a safety check is to be changed, he delicately traces out the name with his




An exposure of the Forger's art, showing a few of the simple pen changes that can be made on the most carefully written checks.

acid, and then with a fine camel's hair brush he can restore the most delicate tints, leaving a perfect safety check for his own purposes. Thus no bank safety paper is a protection against him.

**11. Changing the Payee's Name.**—The largest percentage of loss from altered checks occurs from changing the payee's name. Large checks are seldom raised, but the payee's name is changed to "bearer" or "cash." Many names permit of changing by adding a letter or a syllable, or a few pen strokes. Thus, F. C. Ahrens is changed to F. C Ahrenson by simply adding the letters "on," and "The Fair has frequently been changed to Theo. Fairfax" by a very simple addition.

**12. History of Check Protectors.**—The first mechanical device for protecting the amount of checks was one which crimped the paper over the numerical amount of the check. This was followed by a machine which punched the numerical amount of the check through the paper. Next came the machine stamping the words "Not over $000 dollars.". Check protecting manufacturers then produced a great variety of machines which wrote or stamped the amount in words in colored ink, as well as machines which stamped the amount in numerals. Such machines were generally accepted as insurance against alteration, and are still so considered by many people.

**13. A Game of Put and Take.**—Step by step the cunning skill of the crook has kept pace with the inventive genius of the manufacturer. He soon learned that it was a simple matter to iron out the crimped surface of the check and to paste little discs of paper or apply tinted chalk when the check was perforated. In the case of machines which stamped the words "Not more than $000" in indelible ink he discovered a means of erasing the indelible ink and stamping in a greater amount by the aid of a similar device. With the invention of an instrument which broke up and disturbed the surface of the paper the criminal was forced to seek another method of fraud and he found it in the practice of changing the payee's name to bearer or to cash. Because of the fact that these check protectors do not permit of writing a large amount, the professional also devised the scheme of taking a small check reading

THIRTY-FOUR DOLLARS FIFTY CENTS

and writing a larger amount above these words on a similar machine so that the check reads

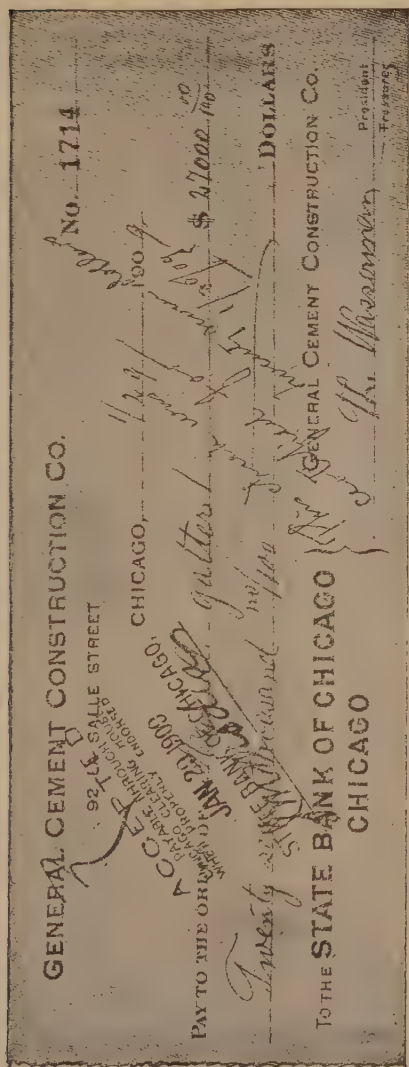
ONE THOUSAND NINE HUNDRED AND
THIRTY-FOUR DOLLARS FIFTY CENTS

The paying teller can see at a glance that it would be impossible to write the whole amount on one line so he pays the check without questioning it.

**14. Protecting the Payee's Name.**—The modern check protector accomplishes three things. First, it macerates the amount line and prints the amount in indelible ink into this broken paper surface. In the second place, it prints the words at such an angle that the very largest amounts can all be written on one line and in the proper place. And finally, it so macerates the payee's name when once written that it has never been successfully altered. Practically all of the earlier mechanisms eliminated the dishonest office man and the unskilled check alterer, but the professional was not discommoded. He found ready means of overcoming every barrier to his success, and his profits grew larger year by year. But the contest between inventor and criminal seems finally to have been decided in favor of the inventor, and for the present, at least, the man who uses the best protective device is comparatively safe.

**15. A Warning.**—There remains only the necessity of bringing to the attention of the general public the ever present danger of sending out unprotected checks. Great and small, rich or poor, the liability is the same, and the rich man can better afford to suffer the consequences than his less fortunate brother. If thru your carelessness a crook raises your check and cashes it, you are liable for the increased amount even though that sum is a hundred times greater than your bank balance. And carelessness has been defined by the courts as the failure to take all reasonable precautions.

**16. Writing Checks in Pencil.**—Checks written in pencil are perfectly good, but they are nevertheless a source of great danger. Some years ago a wealthy cattle buyer made a practice of going through the country handing out penciled checks in payment of his purchases. On one occasion he gave a farmer a $10.00 check in exchange for a calf. The




THIS $27.00 CHECK

shows a simple pen change. It was drawn for $27.00 certified by the Bank for that amount, then raised to $27,000 by adding "thous" before the word "and;" after which it was cashed as a genuine $27,000 certified check.

farmer needing ready cash sold the check to a passing junk man, who, after inserting his own name as payee, and raising the amount to $2000.00, sold his horse and wagon, cashed the check at the cattle buyer's own bank, and left the country. The Bank is responsible only for the signature.

**17. Rules for Writing Checks.—**

a. A check should be made payable "to the order of" a specific person, never to bearer.

b. Write figures plainly with ink, never with pencil. Don't make it necessary for your banker to pay every check on suspicion.

c. Be sure that the amount in figures corresponds with the written amount. The bank will always pay the written amount.

d. Write the amount of the check as far to the left as possible so that no additional words or figures can be inserted.

e. Fill in the space remaining with a heavy black line so that nothing can be added.

f. Exercise the utmost care in writing and handing out checks. The person who carelessly draws a check must stand any loss which may occur through its alteration.

g. Remember that a check is your order to the bank TO PAY OUT MONEY, and that it is necessary for the bank to know WITHOUT QUESTION when, to whom, and how much it shall pay.

h. Use the best known mechanical methods of protecting your check against alteration.

**18. Carelessness in Endorsing Checks.**—The habit of endorsing checks in blank should be discouraged for more than one reason. If you endorse a check by simply signing your name across the back of it, that endorsement has the effect of making the check payable to any holder, or to bearer. If it is lost or stolen it is as valuable to the finder or thief as the actual currency would be. Many business men make a practice of endorsing their checks in blank and carrying them to the bank for deposit. Suppose there is a hold-up or that in the excitement of an accident or a fire on the way to the bank, the checks disappear. The unfortunate owner has about one chance in ten of getting the money back. Again, by endorsing a check you vouch for its genuineness in every respect. Thus, if you endorse in

blank and permit the check to come into the hands of a forger who afterwards raises the amount, you have made yourself liable for the larger amount. Always endorse a check payable to some specific person or firm. If the checks are intended for deposit, write across the back the words: "For Deposit in First National Bank" or "For Deposit Only" and sign your name. (For other forms of endorsement see Section 2 under Commercial Paper.)

THE FIRST PASS BOOK.

**19. Carelessness in Keeping Records.**—When a man put money in an English Bank three hundred years ago, his deposit was recorded by notches in a stick, which was then split, the bank keeping one part, the depositor the other. Before he could withdraw the money the two halves had to be matched together. When a man puts money into a bank today his deposits and withdrawals are all carefully recorded by an efficient system of modern bookkeeping. However, the individual does not always exercise the same great care in keeping his own accounts. As a result he allows his account to be overdrawn, injuring his credit with the bank, or he issues checks when he has no money in the bank thus lowering his credit standing with his creditors. One check coming back marked "Not sufficient funds" will do more damage to a man's credit than a dozen past due accounts,

and may destroy a commercial reputation it has taken years to establish.

**20. How to Check Your Bank Balance.**—Call at the bank for your statement and vouchers every month. Check the bank statement with your own check book in order to avoid errors, detect strange checks, and to save confusion and loss of time.

a. Always keep a correct record, on the stubs of your check book, of all deposits and checks.
b. See that you receive all checks charged to you on the bank statement, and arrange them in order.
c. Check off stubs for all checks returned with your statement, also verify deposits shown in your pass book with those shown on the statement.
d. To the balance shown on the last stub used on which this statement is balanced, ADD the amounts of all checks shown on the **unchecked stubs**, that is the amount of outstanding or unpaid checks.
e. The total should agree with the balance shown by the bank. Report any differences immediately.

**21. Losses Due to Ignorance.**—Let us next take up the class of losses which are the direct result of ignorance. What are some of the common mistakes people make in their banking business because they don't know any better?

**22. Ignorance of the Value of a Bank Account.**—Although the number of bank accounts in the United States averages better than one for every person in the country yet there are thousands of people who do not take advantage of the convenience and safety which banks offer for the handling of money. There are four distinct ways in which the man who has no bank account is likely to lose. **In the first place,** when a check, a pass book, a certificate of deposit, or a bank draft is lost or stolen the owner has some chance to recover, but when the cash is gone, it is usually gone forever. **Secondly,** the lack of a bank account naturally leads to a lack of credit. The man without enough money to warrant a bank account has a decided limit placed on his buying power. **Thirdly,** the man who has no banking acquaintance is always subject to inconvenience and delay when he wishes to cash a check or a bank draft sent to him from another person. **And in the last place** it very often happens

that a young man going into business is denied the financial help he needs from the bank for the single reason that he is unable to show any satisfactory savings balance or other visible evidence of his character and habits. Thus the man who has no bank account runs the grave risk of losing money, credit, time, and opportunity.

23. **Failure to Cash Checks Promptly.**—The holder of a check should present it for payment within a reasonable time after he receives it. He may keep it as long as he pleases but if in the meantime the bank fails, he cannot demand payment again from the maker. The law provides that the check should be presented at the bank for payment or forwarded by mail for collection on the same day it is received or not later than the day following. Again a man's death automatically stops payment on all his outstanding checks. In other words, if a man dies before you have deposited his check, the bank will refuse to cash it and you will be obliged to wait for your money until his estate is settled. It is a matter of safety, therefore, to deposit all checks, or enter them for collection without any unreasonable delay.

24. **The Danger of Joint Accounts.**—It is sometimes desirable for two persons to deposit money in their joint names, payable to either or both signatures. A joint account of man and wife subject to withdrawals by either during their lifetime, and by the survivor in event of the death of the other, is often a very wise arrangement. But in those states having an inheritance tax it may not be generally known that if one party to a joint account dies, the other is not permitted to draw out the money until the State Treasurer or other authority has been notified of the death, and given his consent to the withdrawal. The same laws govern the actions of a Bank or Trust Company having in its possession a safety deposit box of a deceased person. This box may not be removed or opened by friends or relatives until the proper State official has checked its contents and given his release. Thus it frequently happens that at a time when ready funds are most needed the cumbersome processes of the law step in and cause uncertainty and delay.

25. **The Liability of Shareholders.**—The shareholders of most corporations are liable only for the amount they have contributed or subscribed. National Bank shareholders are

liable for another sum, equal to the par value of their stock, provided as much may be needed to pay the bank's debts in case of failure. Thus if the First National Bank fails and you own $1000.00 worth of its stock, you might lose the first thousand and be required to pay another thousand. The owners of bank stock do not always realize the extent of their personal liability, and the point is brought out here to show how easily and in how many unexpected ways a man can lose money because of his ignorance of the law.

**26. The Functions of a Bank.**—To many individuals a bank is nothing more than an elaborately furnished building with a lot of dignified individuals sitting around at mahogany desks, trying to look wise, and an immense safety vault filled with gold and currency. To many others a bank is merely a convenient place in which to get a check cashed. Few really understand the internal organization of a bank, or know its real functions. As a result of this lack of understanding the Banks are unable to perform the services they otherwise might. Here briefly are the real functions of a bank:

a. To provide a safe place for the custody of money and other valuables.
b. To loan money for legitimate business purposes.
c. To issue money (In case of National Banks).
d. To facilitate the transmission of funds by drafts, or bills of exchange.
e. To encourage thrift.
f. To act in an advisory capacity with its patrons on all matters of an economic or financial nature.

**27. How a Banker Makes His Money.**—A Banker primarily is a dealer in money. He borrows of one party and lends to another. The difference between the terms at which he borrows and those at which he lends, forms the source of his profit. By this means he draws into active operation those small sums of money which were previously unproductive in the hands of private individuals, and at the same time furnishes accommodation to those in need of additional capital for carrying on their commercial transactions. Anything that the banker can do to encourage thrift and improve methods of business among his customers, automatically increases his deposits and swells his profits. In banking, therefore, as in any other business, real service means suc-

cess, not only for the bank individually, but for the community it serves.

**28. What a Bank Means to You.**—A bank, therefore, means a place where you can leave your money in safety; a place in which to borrow money if you need it for some legitimate purpose; a place where you can purchase a draft or bill of exchange that will be legal tender in every country in the world; a place to learn the advantages of saving; and a friendly place to turn to when you are in need of information, advice, or assistance in your personal or business affairs.

**29. What the Federal Reserve Bank Means to You.**—The framers of the Federal Reserve Act had three main purposes in view. They wanted, first, to prevent panics, second, to expand commercial credits, and third, to economize on the use of gold in bank reserves. In order to accomplish these ends the Federal Reserve System was established, not primarily a lot of banks, but a new banking machine supported by all the resources of the existing banks. The Federal Reserve banks draw their capital from the established National and State Banks, and, through co-operative banking, put them in a better position to discharge their duties to business. While the Reserve banks are subject to government supervision, they are not in any sense government institutions. They are privately owned banks. Their stock is all owned by member banks.

**30. To Prevent Panics.**—The panic of 1907 witnessed the complete breakdown of our money system. Cash was at a premium, banks stopped paying out money, and clearing house certificates were issued instead of currency. In the new federal reserve system it was planned to prevent any such money famine by the issue of bank notes based on

commercial paper, with 40% of gold reserve held against the notes by the issuing bank. These notes when presented at any other Federal Reserve Bank must be at once forwarded to the issuing bank for redemption, thus assuring the retirement of the notes when they are no longer needed. Provision is also made for the ultimate retirement of both United States' notes and National bank notes, and to give the country a currency composed of gold and reserve notes with silver certificates for small bills.

**31. To Expand Commercial Credits.**—The rediscounting of commercial paper had been almost unknown in this country prior to the establishment of the federal reserve system. As a result credits arising from commercial paper stayed at the bank where the original credit was given instead of flowing from bank to bank according to the requirements and conditions in different sections of the country. The new law permits reserve banks to rediscount certain commercial notes, and also certain acceptances which are based on exportation or importation of merchandise. This rediscount feature means more to the ordinary mortal than all the others. Simply, rediscount means that when your local banker, with $200,000 deposits, has loaned out $160,000 on commercial paper (notes of your dry goods merchants, grocerymen, druggists, or farmers) he is no longer at the end of his rope. If some unforseen circumstance stampedes Tom, Dick and Harry, and the rest of the depositors into demanding their money at once, instead of closing the bank and going into the hands of a receiver as banks used to do before the establishment of the reserve system, your Banker endorses the $160,000 in notes and sends them to the regional reserve bank, which rediscounts the paper and sends back the cash. On the other hand, if business is good in your city and the manufacturers, merchants and farmers require additional capital to take advantage of the conditions your banker may rediscount the $160,000 in notes at the Federal Reserve Bank as before and loan the money out again. Thus a simple, sound, safe, and best of all an elastic system of credits is made possible. The credit facilities of your local bank are practically doubled and you personally have two chances to borrow money for legitimate purposes where formerly you had but one.

**32. What Paper May Be Rediscounted.**—It is interesting to note that the main idea in the minds of the framers of

the Federal Reserve System was to hit the so-called "money trust" of the country. Wall Street was blamed for all the panics and for the fact that the credit system of the country could not supply enough funds for ordinary business development. The Federal Reserve Act not only broke the financial backbone of the money trust, but it went still further. It completely divorced investment banking from commercial banking. Notes secured by stocks or bonds as collateral, no matter how strong the market demand for such securities may be, cannot be rediscounted by a Federal Reserve Bank. Notes secured by obligations of the United States are the only exceptions to this rule. Stock market fluctuations have thereby been prevented from having any effect on commercial business. All other commercial notes, drafts, bills of exchange, or acceptances bearing the indorsement of a member bank may be rediscounted with certain limitations. To prevent over-expansion or inflation of credit the Federal Reserve Board is authorized to define the character of bills eligible for discount, to limit and regulate the amounts and to fix the rates of discount.

**33. Less Gold For Bank Reserves.**—The third purpose of the act was to economize on the use of gold for bank reserves. The Bank and Government vaults of the United States contained by far the greatest amount of gold ever accumulated by any nation—an amount larger than was necessary for the maintenance of sound credit. These big reserves were necessary because of the lack of unity in our banking system. In theory, each bank was supposed to keep enough gold on hand for its own emergencies. In practice this theory broke down time after time and it was only the voluntary co-operation among banks that saved our credit structure. Bankers soon learned that is was better business to assist a weak institution than it was to permit that bank to fail and drag others with it. The Federal reserve system has turned these voluntary and haphazard methods into regulated and systematic co-operation under the control of the Federal Reserve Board. Thus we have a unified system instead of a system composed of thousands of separate banks, each solely dependent on its own resources. Under such a system a much smaller gold reserve will serve as a solid foundation for the credit structure.

**34. Limitations of the System.**—The remark is often made that the Federal Reserve System is a cure for all business and financial troubles. It is not. Like every other man-made institution it has its limitations. Simply because it brought us safely through the trying times of the war and of the adjustment period afterwards, there is no good reason to suppose that it can build its superstructure on thin air. It can utilize and liquidate our inactive resources. It can give to us the full benefit of our assets. But underneath it all there must be a foundation of honesty, virtue and sound business principles.

**35. What the Federal Farm Loan System Means to You.**—If you are a farmer or prospective farmer the Federal Farm Loan System means that

a. You can borrow money for agricultural purposes up to 50% of the appraised value of your land and 20% of the value of the permanent improvements, provided that the amount is not less than $100.00 nor more than $25,000.00.

b. You get your money at a lower rate of interest than would be probable through any other organization, especially in a new country where investment funds are scarce.

c. The length of term and the optional privilege of payment, in part or in full, after five years, are unequaled by any other loaning agency.

d. It gives you the privilege of spreading your payments over a period of 40 years in small installments.

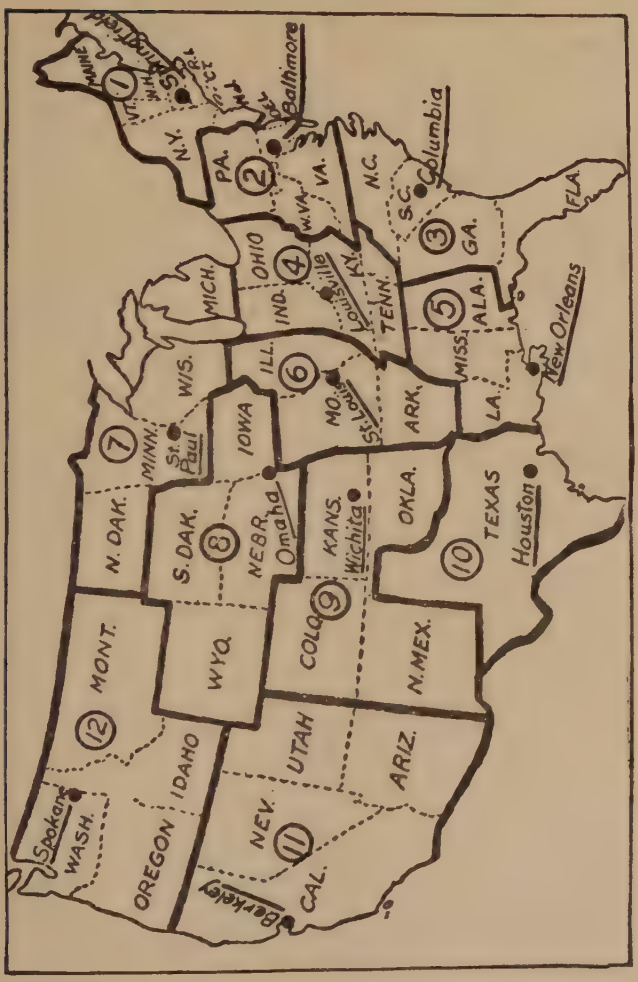
e. It enables you to pay off your loan according to your earning power.

f. You are required to use the money you borrow for productive agricultural purposes.

If you are an investor, the Farm Loan System means that:

a. You can buy bonds which are in reality first mortgages against the farms of the United States, every dollar borrowed representing $2.00 worth of land.

b. These bonds are tax exempt, that is, you will not have income taxes, or state, county, or municipal taxes to pay on them.




MAP SHOWING THE LOCATION OF THE 12 FEDERAL LAND BANKS

c. The bonds are in small denominations from $25.00 up, so that they may be purchased by people with small savings.

If you are just an ordinary citizen, the Farm Loan System means, that:

a. The cost of living will come down as a result of the establishment of more farms and of better farming methods.

b. The wasteful and inefficient system of farm tenantry will give way to one of economical and intelligent ownership.

c. That where our farmers formerly paid 9% annually on a volume of four billion dollars, they now pay but 5%. This alone is an actual saving of $160,000.000 not only to the farmers but to the country as a whole.

Revolutionary? Yes. Socialistic? Yes. But it puts the interests of the majority above the interests of the few. It upsets all the dope in financial struggles but it writes "victory" on humanity's side.

**36. What Does a Bank Statement Mean to You?**—Many people who have no knowledge of accounting, feel that they can not understand a bank statement, and therefore pay no attention to it. This is a mistake. Every person who has money on deposit, either in a savings or checking account ought to know the condition of his bank, and how its condition compares with that of other banks. Below is a simple statement of a moderate sized national bank, together with an analysis of the various items:—

**Resources**

| | |
|---|---|
| Cash on Hand and Due from Banks | $201,568.71 |
| Loans and Discounts | 964,393.37 |
| U. S. Bonds to Secure Circulation | 30,000.00 |
| Redemption Fund | 1,500.00 |
| Bonds and Other Securities | 500,050.00 |
| Banking House | 50,000.00 |
| Stock in Federal Reserve Bank | 7,500.00 |
| | $1,755,012.08 |

**Liabilities**

| | |
|---|---|
| Capital Stock | $ 200,000.00 |
| Surplus | 50,000.00 |
| Undivided Profits | 22,197.25 |
| Demand and Time Deposits | 1,225,679.21 |
| Rediscounts and Money Borrowed | 225,000.00 |
| Reserve for Taxes and Interest | 2,135.62 |
| Circulation | 30,000.00 |
| | $1,755,012.08 |

**37. Resources.**—By resources is meant what the banks own. Let us consider each resource as it appears:—

**Cash on Hand and Due From Banks.**—This item represents the actual cash on hand in the bank, the money which the bank has on deposit with the Federal Reserve or correspondent banks, and checks deposited for collection which are drawn on other banks. Banks usually keep a considerable sum on deposit with other banks, in order that they may draw drafts against that money, when necessary.

**Loans and Discounts.**—This represents the value of the promissory notes of the firms or individuals who have borrowed money from the bank. The interest from the loans constitutes the main source of the bank's income. When you apply for a loan your request is passed on by the officers of the bank or a discount committee appointed for that purpose, whose business it is to see that the bank is properly safeguarded in giving you the money.

**U. S. Bonds to Secure Circulation.**—National Banks have the privilege of issuing their own National Bank notes, but in order to do so they must buy and deposit with the Treasurer of the United States an equal amount of United States' Bonds to secure payment of the notes. This amount may not exceed the capital of the bank.

**Redemption Fund.**—This is a fund equal to 5% of a National Bank's outstanding bank notes which must be deposited with the Treasurer of the United States to redeem those notes which have become unfit for circulation. When notes are sent to the Treasury for redemption they are charged to this account.

**Bonds and Other Securities.**—This sum represents the value of such bonds or other securities as the bank has in-

vested in. High grade bonds make a very desirable investment for surplus funds because of their safety and because they can be sold advantageously on short notice, at a price quoted every day.

**Banking House.**—Under this head there is included the cost of the ground, building, furniture and fixtures used by the bank in carrying on its transactions. This is valuable property owned by the bank.

**Stock in Federal Reserve Bank.**—All member banks in the Federal Reserve System must own a block of stock in their district reserve bank, equal to 6% of their combined capital and surplus. Up to the present time the Reserve banks have found it necessary to call only 3% of the requirement.

**38. Liabilities.**—By liabilities we mean the things that the bank owes. Every dollar paid into the bank immediately becomes a liability. The earnings belong to the stockholders, hence are liabilities. A deposit of money is recorded as a resource, but it really belongs to the depositor and must be included among the liabilities. In this particular statement the liabilities are shown under seven different headings:—

**Capital Stock.**—When a bank is organized the stockholders pay in a certain amount of money to protect the depositors. This is called the capital or the capital stock of the bank. It is shown as a liability, because the bank is indebted to the stockholders for what money they pay in. In other words, the stockholders are the owners of the bank. If, however, the bank goes broke or is unable to pay its depositors, the capital may be used. In addition the stockholders in National Banks and in some state banks are personally liable for an equal amount, if it is needed to pay the debts.

**Surplus.**—A national bank is required by law to accumulate from its profits a fund which will equal 20% of its capital. This is called the surplus fund. Many banks of course accumulate a fund much larger than 20% of their capital. The surplus is also a liability because it belongs to the shareholders, but it remains in the bank as part of the working capital.

**Undivided Profits.**—The undivided profits account represents earnings which have neither been added to the surplus nor paid out in dividends. The size of this account varies

with the earnings and when it is large enough, it is transferred to the surplus account. A well managed bank never pays out all its profits in dividends.

**Demand and Time Deposits.**—Money deposited with a bank in a checking account is a demand deposit. The savings accounts on which interest is paid are time deposits. The bank owes its patrons for all these deposits and must be prepared to meet their demands.

**Rediscounts and Loans From Other Banks.**—It frequently happens that a bank must borrow money from other banks in order to accommodate its customers. This is done by putting up good security as collateral for the loan, or in the case of a member bank in the Federal Reserve System, by rediscounting commercial paper as explained above. These loans being debts owed by the bank must be shown as direct or contingent liabilities.

**Reserve for Taxes and Interest.**—Instead of carrying a large sum of money as undivided profits, most banks set up a reserve fund for the payment of taxes, interest, bad debts and other necessary expenditures. As the payments are made, they are charged against this account. Thus the bank avoids creating a wrong impression in the published statements it is required by law to make.

**Circulation.**—This item represents the outstanding national bank notes issued by the bank. A definite promise to pay has been made, and the amount is therefore carried as a liability.

**39. Published Statements.**—The law requires banks to submit statements to the proper authorities and to publish them regularly in local newspapers. This is in addition to the official examination to which all banks are subject by National or State Bank Examiners, Clearing House officials or Reserve Bank Examiners. The published statements, if fully understood, will give depositors an accurate idea of the standing of their bank. By learning to read between the lines you will soon discover that what at first appears to be only a formidable and uninteresting column of figures, is in reality a very simple and instructive picture of the progress and condition of your Bank.

**40. The Morris Plan.**—During recent years there has grown up in the larger cities a chain of small banks whose business it is to take care of the needs of the small borrower. They are known as Morris Plan Banks. The founder, Mr.

Arthur J. Morris, realized that the extortion and usury practiced upon the small borrower was breeding discontent, socialism and anarchy and his first bank in Norfolk, Virginia, was successful both from a humanitarian and a financial standpoint. The essential features of these new banks are as follows:

a. The Morris Plan bank will not make real estate or collateral loans, or loans based on pawn or chattel security.
b. The basis of credit is character and earning power.
c. The borrower must secure two signatures in addition to his own.
d. All loans are made for a period of one year.
e. All loans are amortized at the rate of 2% on the loan, or in other words, are paid back on a weekly-deposit basis.

**41. How the Plan Works.**—Thus we will suppose a carpenter has been ill and is owing his doctor, his grocer, his coal man and others a total of $250.00. He goes to a Morris Plan Bank and requests a loan to pay up his debts. He gets two friends to sign the note with him and the Bank gives him the money. At the same time he is required to open up a savings account and to make regular weekly deposits of $5.00. He goes out of the bank a happy man, proud of the bank's confidence in him, and able to give his best efforts to his job. Contrast his state of mind with that of the man who must patronize the loan shark, pay 15 to 20% interest, sacrifice his self respect, and put up his salary and his household furniture as security for a small loan.

**42. Character is Credit.**—The Morris Plan Bank is simply another proof that in the last analysis character is the real basis of credit, and that character can be found in the ready cut cottage as well as in the gilded mansion.

## HOW TO SAFEGUARD YOUR HEIRS

**1. Religion and Success.**—History informs us that the world's most successful men have been those who carried their religious belief into their daily business experiences. In order to make good in life it has always been necessary to be good and to do good.

**2. After Death—What?**—Volumes have been written on the immortality of the soul and the life beyond the grave, but little attention, if any, has been paid to the very practical problem of a man's property after his death. What is to become of your estate, Mr. Business Man? Have you taken every possible precaution? If you have you are one among hundreds.

**3. Unforseen Events.**—A man may have an abiding faith in his ultimate destiny, but it does not always pay to display that same measure of faith in his fellow creatures. Experience teaches us that after death a man's best friends often turn against him and pay back his kind offices by attempting to defraud his widow and orphans. Even in the case of his most reliable associates in business, all relations and responsibilities undergo a radical change when he is gone. His wife or son, or daughter, lacking perhaps, prac-

tical experience and knowledge are often too hopefully confident as to their own ability to achieve superior results along new and untried lines. Unnecessary expense, litigation and loss naturally occur.

**4. Foresight.**—The successful business man too often fails to make adequate provision for the management and distribution of his estate, thus reducing its value, availability and safety. He may fail to make a will altogether. He may attempt to draw a legal will without legal advice. Frequently he appoints as his executor or trustee a man who is incapable, unable, or unwilling to act in that capacity.

**5. Why You Should Make a Will.**—For all these reasons and for many others a man who leaves any property whatever should exercise the greatest care and the keenest judgment in disposing of it. Any one inclined to leave his estate subject to the distribution provided by law should consider the following:—

a. Where there is no will, real estate is not controlled by the administrator, but passes to the heirs at law. Expensive partition proceedings are usually required before the property can be sold or mortgaged.

b. Where there is no will, the rights of husband or wife depend on the unwieldy assertion of dower. It is sometimes impossible to determine which died first, and expensive litigation is necessary to properly dstribute the property.

c. Where there is no will, it frequently happens that the estate is finally divided in a way which would be very unsatisfactory to the testator.

d. Without a will it is impossible to preserve an interest for the family in a partnership or close corporation.

e. Administration by the State is always impersonal, and inconsiderate. It involves immediate liquidation and distribution with the customary expensive and bitter litigation.

f. Where there is no will the expense of the premium on an administration bond must come out of the value of the estate. (Foot note: For legal points and forms of wills see page 255).

**6. Deeds of Trust.**—There are many people who do not realize that there is another very satisfactory method of distributing and controlling property after death. A deed of

**trust** is an instrument by which property is conveyed to a trustee with directions for its use and control. This transfer may be made either before or after death. It has many decided advantages:—

a. In the first place a deed of trust enables you to set aside a certain part of your property for some specific purpose, absolutely safe from any business reverses you may experience in the future.

b. It takes effect immediately while you are able to observe its effects. If it is attacked you can see that it is enforced. Under a will you would be unable to do so.

c. It saves the court costs and expenses of the probate and administration of your estate.

d. Unlike a will it involves no inheritance taxes, which means a considerable saving.

e. There is no uncertainty, delay, or interruption of business, after death.

f. The control, income and management of the property may be retained under a deed of trust during the life of the maker.

g. And finally a deed of trust is revokable at any time just as a will may be destroyed or changed.

**7. A Will or a Trust Deed.**—Notwithstanding all these advantages there are reasons why a will may be preferred in some cases. Perhaps the maker is unwilling or unable to impair the title, ownership or disposition of the property during his life. Again it may be that it is easier to include and dispose of all of his property at the time of his death. And in many cases probate proceedings are necessary to establish the fact that the real estate is not subject to the debts of the deceased owner. In certain instances of this nature, a will is advisable even if the bulk of the estate is disposed of through a deed of trust.

**8. The Choice of Executors and Trustees.**—Whether a will or a deed of trust is decided upon, the question of the choice of executors and trustees, arises. Should a member of the family, or a trusted friend or business associate be chosen, or should a trust company be selected? Here is where many of us make our mistakes. Every day we read in the papers where individuals appear to have mismanaged estates and of the very large number of estates left open and unsettled. In addition to the much larger number of unreported cases where loss has resulted by reason of the failure of individuals in the management of estates, there are the following reasons why a trust company should be selected:

a. An individual cannot always be depended upon. At the last minute there may be a change in residence, failure of health, death, financial reverses, or a definite refusal to serve.

b. Because a trust company is efficient, giving your estate the benefit of its years of experience, its knowledge of safe investment and the requirements of the law.

c. Because a trust company is economical, cutting off every item of unnecessary expense, and employing every dollar of the trust as profitably as safety will permit.

d. Because the fees are made lower than any competent individual could serve for.

e. Because it is perpetual in that its management does not end with the death, disability, or absence of any individual.

f. Because it is safe. The Trust Company's sole duty is to provide safety for your estate. It will not drink, speculate, or use the funds for its own purposes. It is under the direct control and supervision of the State government.

**9. Life Insurance.**—Many business men prefer to accumulate their estates in the form of life insurance. Any insurance man can tell you of huge policies running up as high as a half million dollars or more. No matter how large or how small your insurance may be, you should exercise the same care in the distribution of the money after your death. A certain amount of ready cash is necessary to pay funeral expenses, settle outstanding obligations, and to avoid the necessity of hasty liquidation. Instead of making the balance payable in a lump sum, why not put it in the form of a trust fund or have it paid in regular monthly payments during the life of the beneficiary. This method would do away with the possibility of loss through poor investments, and at the same time provide a steady, safe income to be depended upon no matter what happened.

**10. How to Save Court Costs.**—There are many cases in which neither a will nor a deed of trust is necessary. For example, consider a man and wife without any material property other than the home they live in. Through a Joint Tenancy Deed, the title to this home may in most States, be made to pass to the survivor without a will or trust deed, and without any attorney's fees or court costs. An official entry in the county records of the death of one party is all that is necessary to establish a good title to the property in the other party.

**11. Joint Tenancy and Tenancy in Common.**—Comparatively few people seem to know about the advantages of a couple owning property in Joint Tenancy, as distinguished from tenancy in common, but there is a world of difference between the two. In the latter there is merely an undivided interest in the property which must be disposed of by will or intestate law after the decease of the owner. In a joint tenancy, on the other hand, the property is owned jointly, and at the death of one party, the ownership passes automatically to the survivor. Any well informed realtor or lawyer can draw up the necessary papers to convey the property to some third person, who will reconvey it to the husband and wife, in joint tenancy.

## HOW TO SAVE MONEY IN THE HOME

### The Ten Commandments of Thrift.

(Adopted by the American Bankers' Association.)

1. Make a budget.
2. Keep an intelligent record.
3. Have a bank account.
4. Carry life insurance.
5. Make a will.
6. Own your own home eventually.
7. Pay your bills promptly.
8. Invest in government securities.
9. Spend less than you earn.
10. Share with others. Thrift without benevolence is a doubtful blessing.

**1. Definitions.**—**Thrift** may be defined as economical management. A **budget** is a comprehensive plan to limit future expenditures. An **appropriation** is one of the items of a budget, a sum of money set aside or reserved for a certain purpose.

**2. The Modern Business Man** operates on the budget plan. Appropriations are made at the beginning of the year to cover manufacturing costs, selling expense, taxes, insur-

ance, advertising, development, and other expenditures. Each transaction is carefully classified, charged to its proper appropriation and made a part of the permanent record. Thus a properly worked out budget is the very life blood of the organization. Without one, it is a matter of hit or miss.

3. **System at Home.**—Take this same business man at home and we find an entirely different situation. There is an absolute lack of system. Supplies are purchased, obligations incurred, and help is hired without any reference to the income. There is no budget, no organized plan of living, and in most cases no records are kept. As a result the family income vanishes with nothing left to show for it, at the end of the year.

4. **It Pays to Plan Ahead.**—Not only can you save more by systematic planning, but you can actually live better on less money. This has been proven by the experience of thousands of people who have adopted a common sense budget and stuck to it. Banks all over the country are opening up special service departments where constructive advice and information is given in planning budgets on incomes both large and small and to those who are not depositors as well as those who are patrons of the bank. Your modern banker has recognized the need of such help. He is trying to encourage thrift. He wants you to manage your household affairs on the budget plan because he knows that you will thereby become a better citizen and a more valuable patron of his bank. His information, advice and assistance are free.

5. **The First Essential** to a successful budget is the determination to keep accurate account of all expenditures. Without such accounts your system is worthless. Ask the average man on the street what it costs him to run his automobile for a year and his guess will be anywhere from $200 to $1000. Ask the woman of the house what the family grocery bill is for a year and her answer will be equally vague. Guess work will not do. If you want to receive full value for every dollar, maintain a certain standard of living, and still put something aside, you must make a budget and see that your expenses do not exceed your appropriations.

6. **How to Make a Budget.**—Classify your future expenditures under six general headings:—Savings, shelter, food, clothing, operating expense, and advancement. Each of these general headings should be fully subdivided to

## THE WAY FORTUNES START

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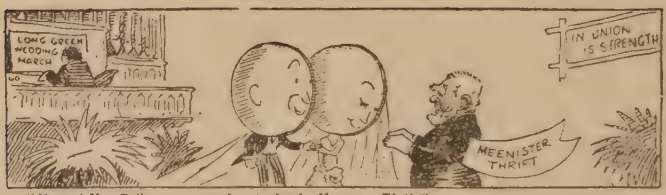
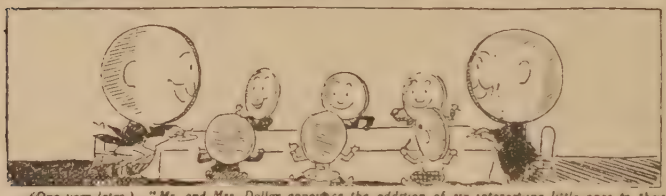
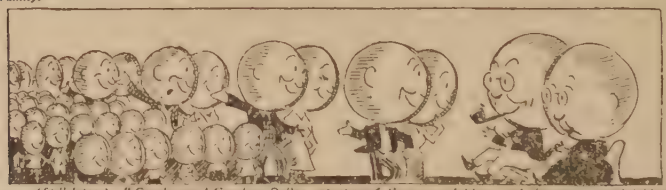



*"Mr. and Mrs. Dollar were united yesterday by Meenister Thrift."*



*(One year later.) "Mr. and Mrs. Dollar announce the addition of six interesting little ones to their family."*



*(Still later.) "Gran'pa and Gran'ma Dollar entertained their six children and thirty-six grandchildren yesterday."*

*(And still later.) "Great-gran'pa and Great-gran'ma Dollar entertained their six children, thirty-six grandchildren, and two hundred and sixteen great-grandchildren yesterday."*

Chicago Tribune—January 22, 1922.

avoid the necessity of a miscellaneous column which so often proves the downfall of the budget. Next decide on a certain amount of saving each month, so much for shelter, food, clothing, operating and advancement, depending on the extent of your income. If there is a large bank in your neighborhood ask the cashier to help you make the appropriations. On the opposite page are shown some sample budgets as worked out by the Society for Savings in Cleveland, Ohio. They are based on living expenses in Cleveland and may require some variations in other places. It is hoped, however, that they will be of some assistance in meeting individual reqquirements.

7. **Keeping Within the Budget.**—As stated above the important thing is to keep an accurate record of expenditures. A multicolumar journal is the ideal arrangement with a separate column for each general and sub-head. If you pay by check it is a simple matter to enter the amounts from the check stub to the proper column in the journal. When all supplies are bought for cash, it is a good idea to enter each purchase in a small notebook to be transferred later. The next step, of course, is to compare the record month by month, to determine which items must be increased, to find out where savings may be made, and to keep the sum total of your disbursements within the limits set by your budget. You may fail dismally the first time, but you will succeed eventually. And in any event an accurate knowledge of your expenses will prove a revelation and an inspiration to you.

8. **Teaching Business to Wives and Children.**—Women are frequently ridiculed because of their ignorance of business methods. How many widows are qualified by experience and training to manage the business affairs of the family? Responsibilities come quicker than we expect so why not be prepared? A budget system will supply the necessary preparation. It is like a new game or puzzle into which wife and children enter with unlimited enthusiasm, and from which they will derive a familiarity with financial and business transactions, and an ultimate understanding of the true meaning of thrift. They will learn to get full value for every dollar expended and they will learn that it is easy to save more than they ever saved before without in any way lowering their standard of living.

### Budgets for Individuals

| Income per Month | $85.00 | $100.00 | $125.00 | $150.00 | $200.00 | $250.00 |
|---|---|---|---|---|---|---|
| Savings | 5.00 | 10.00 | 16.00 | 20.00 | 40.00 | 60.00 |
| Room & Two Meals | 37.00 | 45.00 | 52.00 | 60.00 | 70.00 | 75.00 |
| Luncheons | 10.00 | 10.00 | 12.00 | 15.00 | 18.00 | 18.00 |
| Laundry | 3.00 | 4.00 | 5.00 | 5.00 | 7.00 | 7.00 |
| Clothing | 20.00 | 20.00 | 25.00 | 30.00 | 35.00 | 45.00 |
| Advancement | 10.00 | 11.00 | 15.00 | 20.00 | 30.00 | 45.00 |

### Budgets for Newly Married Couples

| Monthly Income | $125.00 | $150.00 | $200.00 | $250.00 | $300.00 | $400.00 |
|---|---|---|---|---|---|---|
| Savings | 17.00 | 20.00 | 35.00 | 50.00 | 60.00 | 100.00 |
| Food | 35.00 | 40.00 | 42.00 | 45.00 | 50 00 | 55.00 |
| Rent | 30.00 | 38.00 | 50.00 | 60.00 | 75.00 | 100.00 |
| Clothing | 20.00 | 25.00 | 30.00 | 35.00 | 45.00 | 50.00 |
| Operating | 12.00 | 15.00 | 18.00 | 25.00 | 30.00 | 45.00 |
| Advancement | 11.00 | 12.00 | 25.00 | 35.00 | 40.00 | 50.00 |

### Budgets for an Income of $150.00 a Month

| Number in Family | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Savings | $17.00 | $15.00 | $ 9.00 | $ 5.00 |
| Food | 40.00 | 45.00 | 50.00 | 55.00 |
| Shelter | 38.00 | 38.00 | 38.00 | 38.00 |
| Clothing | 25.00 | 25.00 | 28.00 | 30.00 |
| Operating | 15.00 | 15.00 | 15.00 | 15.00 |
| Advancement | 15.00 | 12.00 | 10.00 | 7.00 |

### Budgets for an Income of $250.00 a Month.

| Number in Family | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Savings | $50.00 | $40.00 | $27.00 | $25.00 |
| Food | 45.00 | 50.00 | 58.00 | 65.00 |
| Shelter | 60.00 | 60.00 | 60.00 | 60.00 |
| Clothing | 35.00 | 40.00 | 40.00 | 45.00 |
| Operating | 25.00 | 25.00 | 30.00 | 30.00 |
| Advancement | 35.00 | 35.00 | 35.00 | 25.00 |

**9. Success or Failure?**—The millionaire railroad magnate, James J. Hill, once said: "If you want to know whether you are going to be a success or failure in life, you can easily find out. The test is simple and infallible. Are you able to save money? If not, drop out. You will lose. You may not think it but you will lose as sure as you live. The seed of success is not in you." Every man is the architect of his own fortune. Be sure that you take the first step to guard against failure. It makes no difference whether you start a regular savings plan of $10.00 a month or $1,000, the results proportionately are worth any effort. Out of the acorn of thrift grows the oak of financial independence. The first syllable of TRIUMPH is TRY.

## HOW TO SAVE INSURANCE PREMIUMS

1. Vast sums of money are lost every day in the United States because of a general ignorance of the true meaning of an insurance contract. There is a tremendous waste of time, money, and security, wholly aside from the actual losses due to fire, lightning, wind, sickness, or accidents.

2. **Reasons for the Loss.**—It is possible to classify all the contributing causes under two general heads, namely: ignorance and carelessness. Ignorance is responsible (1) for the fact that a policy holder does not know what his policy provides, (2) for the fact that an individual often pays an exhorbitant rate of insurance on his property, (3) for the fact that he seldom secures full protection, and (4) for the fact that after a serious loss the insured is often unable to es-

tablish a just claim. Carelessnes, on the other hand, (1) causes an annual loss of life and property which simply staggers the imagination, (2) lays waste and destroys thousands of buildings every day, (3) costs the country over 2¼ billion of dollars every year in accidents alone, and (4) keeps the rates on all kinds of insurance twice as high as they ought to be.

**3. Ignorance and Insurance Loss.**—It is fitting, therefore, that we should ask ourselves a few pertinent questions. How much do we really know about insurance? How can we reduce this tremendous waste to a minimum? Let us see if we cannot profit by the unfortunate experiences of others.

**4. Do You Know Your Policy?**—Your policy states in black and white just what the Insurance Company agrees to do and just what you as the insured agree to do. There are at least a dozen ways in which an ordinary insurance policy may become void on account of the policy holder's ignorance.

**5. Examples.**—Just to illustrate we will take the case of a partnership having purchased protection against fire for a five-year period. At the end of the first year let us suppose that the business increases, more capital is needed, and the partners decide to dissolve the partnership in order to form a corporation. All other necessary steps are taken, but no one thinks about the insurance, which still has four years to run. Shortly afterwards a fire occurs, and the adjusters refuse to pay the loss, pointing to a clause in the policy which reads:—

> "If any change, other than by the death of the insurer, take place in the interest, title or possession of the subject of insurance, this entire policy shall be void."

**This identical clause appears in all standard fire insurance policies.** It is put there to be read and understood, but nobody ever reads it or understands it until after the loss. As a matter of fact, there is a blank on the policy for assignment, and another for the company's consent, which is the vital thing.

Again suppose you are carrying an accident policy, paying the regular rate for your particular occupation. If you change your occupation, or enter upon more hazardous duties in your present line of work, you must secure the consent of the Insurance Company, and pay a higher premium. If you fail to do so your policy is void.

Suppose you own a building, fully covered by fire, tornado, explosion and all other forms of insurance, and make a contract to sell it to Jones. Now all the papers are drawn up and properly signed, but before the deed is delivered and before the purchase price is paid, the building is completely demolished by a cyclone. The Insurance Company could refuse to pay the loss, to you, because your ownership had ceased, and to the purchaser, because he had no contract of insurance, and the courts would sustain the Insurance Company.

Here is one more example. "A" decides to build, borrows 50% of the money on a mortgage from his banker "B" and hires a contractor "C" to build the house. Now "A" knows that "B" has taken out insurance on the new house to protect his loan, and consequently he feels perfectly safe. However, during the course of construction the house burns or blows down. "C" having prior lien on the property collects the insurance to pay him for services rendered, leaving "A" and "B" to adjust matters as best they may.

**6. The Result.**—These are actual cases, which have been fought out in the courts, all because of the difference between what the purchaser of insurance thinks he is purchasing, and the protection which the policy actually provides. As a result most good Insurance Companies base adjustments on their established business policy, rather than on the terms of the policies issued. Settlements after the San Francisco earthquake demonstrated this fact in the strongest manner possible. Although practically every policy expressly exempted losses due to earthquakes, the Insurance Companies paid the whole bill in order to keep the good will of the insurance buying public. Nevertheless, it does not pay to risk a legal contest when the matter can be fully understood and adjusted before the loss occurs.

**7. Cheap Rates.**—Many people allow the promise of low rates to influence them in buying insurance. This is natural but dangerous. Suppose for example that you want to insure your life and a glib tongued salesman bases his whole selling talk on the low premiums required by his company. Find out what his policy provides. What will its cash, loan or paid up insurance value be each year in comparison with similar policies offered by other companies? Is there a double indemnity feature? Is there any provision for cancelling of premiums in case of disability? Are there any

unreasonable restrictions, as to occupation, travel, liability in time of war, cancellation in case of fraud? Every one of these features has a direct bearing on the rate, and on the actual value of the policy to you. Frequently the highest priced insurance is the cheapest in the end, and this applies to every line of insurance.

**8. Mutual Companies.**—The rates of fire insurance and automobile insurance are fixed; that is, they are the same in all standard companies. But strange as it may appear, the question of price is always important in writing up these two types of insurance. Why? Because of the fact that in almost every community there are local or semi-local mutual insurance companies selling fire and automobile insurance at nominal rates. In case of loss, the policy holders are assessed to make the payments. There are no high salaries to be paid, no unnecessary expenses, just the mere losses. The theory is beautiful. The danger lies in the limited resources of the companies, and in the purely local nature of the risks. If losses come too thick and fast, members drop out, the rates increase, assessments multiply and instead of the cheapest insurance in the world, the unfortunate policy holder finds it to be the most costly. The same thing is true of Fraternal Life Insurance Societies which are founded on the mutual theory. Experience has taught us that a successful insurance organization must be national in scope, and must distribute its risks and losses over an extended territory.

**9. What is Co-Insurance?**—This form of insurance is a reduced rate insurance, and is sold with the understanding (many times not fully explained by the agent) that the insurance company is responsible and will pay for only a certain percent of the loss. More misunderstandings arise where this form is used than in "straight" insurance. In co-insurance, the insured agrees to always carry and pay premiums on a certain percent (usually 80%) of the insurable value. Where the insurance is 80% of the insurable value, it naturally follows that in the event of a total loss, or 100% loss, the insurance company pays 80% and the insured stands the balance.

**10. Explanation.**—This form of insurance is best explained by example, and the following suppositions will show how it works.

| | |
|---|---|
| Suppose insurable value is | $1,000.00 |
| 80% of insurable value | 800.00 |
| If loss is total, the face value of policy or.. is paid. | 800.00 |
| If loss is partial, say | 500.00 |
| The full amount is paid, or | 500.00 |
| Suppose insurable value is | 1,000.00 |
| Insurance, on 80% basis, is only | 600.00 |
| Loss is | 600.00 |
| The insurance company is liable for only three-fourths of the loss, as insurance is only three-fourths what it should be, so the amount paid would be three-fourths of | 600.00 |
| or | 450.00 |

It is, therefore, necessary where this form of insurance is used, to keep the amount of insurance at all times, up to 80% of the insurable value. Where the insurable value varies at different seasons, several times a year, this feature is a disadvantage.

**11. Are You Fully Protected?**—Is your house insured against fire, lightning, or windstorm? Have you life insurance to cover the mortgage on your home, to educate your children, and to provide for your family in case of your death or disability? Is your business properly insured? Are your employees insured for compensation? Are you insured against accident, disability, and illness? Is your automobile insured against fire, theft, collision, and personal liability? Does your life insurance cover inheritance taxes or have you an insurance estate which you can leave whole and free from inheritance taxes? If you are insured against all these contingencies, your mind is free from worry, you have equalized the chances, and you have made yourself and your family secure for the present and for the future.

**12. Alarming Facts for Auto Owners.**—A blind-folded man trying to cross Michigan Avenue or Broadway during the rush hour isn't half as foolish as the automobile owner who neglects to carry full insurance against injuries to persons and property. And yet, the number of men and women who do not believe in this form of protection is astonishing. If you are driving along a quiet street at a speed of ten miles an hour and a child deliberately runs under the wheels to be

killed, the chances are a hundred to one that in a jury trial you will be held for damages from $5,000 up to $20,000 if not for murder. Most cars are insured against fire and theft only. Liability insurance may double your annual premium, but it may save you ten or twenty times the cash value of your machine. For proof of this statement consult the court records.

**13. The Small Town Excuse.**—The insurance records on liability bring out some interesting facts. In the first place the majority of the automobile accidents in the large cities occur outside of the congested districts. In other words, traffic supervision in the downtown areas has reduced the number of accidents to a minimum. In the next place the automobile traffic in the average small town is now about on an equal with that of the suburbs and outlying districts in the large cities. And finally, the opening up of good roads has made access to the cities so easy that a large percentage of outside machines are involved in city accidents. For all these reasons the small town or rural car owner is no longer immune. He should buy full protection against personal liability and property damage. It is an investment that may pay back a thousand percent in dividends. To be without it is a risk no automobile owner can afford to take.

**14. Employer's Liability.**—Practically all of the States now have laws known as Workmen's Compensation Laws which provide for compensation by the employer when workmen are killed or injured while performing their duties. Ignorance and carelessness alone are responsible for the fact that many employers are not aware of their liability and fail to take out adequate insurance to protect themselves. Let the insurance Companies assume the

risk. The cost is a mere trifle when the unexpected happens, and an employee is killed or maimed for life.

15. Life Insurance.—And finally, about your life insurance. This is not propaganda for the Insurance Companies. It is just a sincere attempt to bring out in a few words some of the reasons for insurance losses. You may not believe in life insurance. Perhaps you reason that by investing the same amount of money in safe securities you can double the returns over a period of twenty years. And you are right. But how many insurance buyers today would actually put away the amount of their premiums? How many of them are qualified to select the proper investments? How many of them will be alive at the end of twenty years? There are just a few questions to ask yourself while we are on the subject of insurance.

16. An Immediate Estate.—The day has come when it is no longer necessary to plead the case of life insurance. Its advantages are too well known. There are too many solicitors on the streets. The tendency, however, is to ignore the one big feature, the supreme selling talk for life insurance, namely, that it creates an immediate estate. It takes a succesful business man years and years to build up his fortune. The young man today who is earning a moderate salary can walk into an insurance office and by the mere stroke of a pen create an estate of $5,000, $10,000, $25,000, or $50,000 and up, depending upon his earning capacity and his ability to save. Of course, he must work and save to meet the premiums, but if he lives only an hour after the payment of the first premium, he has already done as much as the successful business man has accomplished in fifty years of active business. He has equalized the chances of life.

"His old horse died and his mule went lame,
And he lost his cow in a poker game;
A cyclone came one summer day
And blew his house and barn away;
Then an earthquake followed to make it good
And swallowed the ground where his house had stood;
And then the mortgage man came around
And heartlessly claimed the hole in the ground;
This shock was so great that he up and died,
And his wife and children wept and cried;
But something was left for the kids and wife,
For he carried insurance on his life."

—Selected.

**17. How Losses Are Paid.**—A great many people have the idea that if the property is insured, and burns, the Insurance Company will without question pay the full amount of the policy. Unfortunately, this is not always the case. The policy is a contract in which both parties agree to do certain things, and we have just seen how easy it is to violate the terms of this contract through misunderstanding or ignorance. We now come to a matter of even greater importance, it being that of "proof of loss."

**18. Proof of Loss.**—Whether your property is a residence with household goods, or a mercantile establishment with a stock of goods, the principle is the same. You must (a) **present to the Insurance Company in writing** a schedule of the loss, and (b) **produce records or documents to prove your claim.** This matter is so important, especially to the retail merchant or small manufacturer, that we give below our outline of the essential items for making up a satisfactory proof of loss:

For the merchant:

Inventory as of a certain date, figured at replacement value.

Merchandise purchased since inventory, figured at replacement value.

Freight, drayage, and labor in handling the merchandise.

MINUS

Sales since inventory, figured at cost.

Salvage.

For the manufacturer:

Inventory as of a certain date, figured at replacement value.

Purchases of raw material.

Manufacturing costs.

Freight, drayage, etc.,

(In manufacturing costs figure only such overhead expenses as can be properly charged to manufacturing. Office overhead, that has to do with selling, etc., can not be included. Power, light, taxes, etc., can be figured as part of the manufacturing expense.)

MINUS

Sales since inventory, figured at actual cost.

Salvage.

**19. The Necessity of Records.**—The human memory cannot be depended upon to keep track of transactions in business, therefore, written records are kept. The successful farmer, as well as the merchant and manufacturer must supplement his memory by written accounts. And these accounts are usually conspicuous by their absence when they are most needed to prove the accuracy of memory. Why? Because in most cases they are not fully protected by fire.

**20. In Some States** a clause appears in the fire insurance policy relieving the Insurance Company of all liability unless the policy holder can produce his last regular inventory and his record of sales and purchases since the date of the inventory. In every state settlements and payments are greatly delayed because of the distruction of vital records.

**21. A Loss of Millions.**—Every year the loss of records means the loss of millions of dollars. Here we read of a big corporation carrying $100,000.00 in Fire Insurance, settling the loss for $75,000.00 because of its inability to prove the loss. Or take the average small town merchant whose store and records are entirely destroyed by fire. He collected his insurance money and ran an advertisement in the local paper informing his customers of his loss and requesting them to come in and pay their bills. About half of them came in and made settlement, but as only a few could remember the exact amount, he collected in only about $500.00. As a result he lost $2000.00 in accounts besides the loss of

future business from those who had refused to pay any attention to his advertisement. The value of most business houses rests on good will and so when a fire occurs, it is very important to start up business again promptly. If the essential records of a manufacturer or merchant should happen to be destroyed, it might take five or six months to secure duplicate invoices and records, before the loss could be satisfactorily proved. Such a delay would be the ruination of almost any business.

**22. The Reason for Record Loss.**—There is just one reason for these losses. Business men in general are very particular about their employees, the quality of goods they produce, and the good will of their customers. They spend a great deal of time and money on their insurance problems and are careful to obtain full protection against every contingency. But here their precautions too often end. Instead of providing fire-proof safes to house their records they cut down the overhead expense by choosing an old out of date iron safe, or by using no safe at all. Consequently, where a loss occurs, the very devil is to pay. The Insurance Company won't.

**23. Two Ways of Protecting Records.**—There are two ways of providing security for your valuable papers. One is by carrying them daily to a place sufficiently removed from the place of business to make it very unlikely that both places will be destroyed at one time. The other, better way, is to provide a proper receptacle for the records, so that no matter how severe the fire may be, they will not be destroyed.

**24. Fire Proof Safes.**—In recent years manufacturers of safes have devised means of determining just how much heat a safe will withstand and still protect its contents. In buying a safe do not be deceived. Find out the facts.

**25. What Your Policy Does Not Protect.**—Here are a few of the valuable things an ordinary fire insurance policy does not protect:—Currency, accounts, bills, deeds, invoices, notes, securities, correspondence, manuscripts, card records, mortgages, formulae, contracts, heirlooms, and insurance policies. Make secure what you can't insure.

**26. Carelessness and Insurance Loss.**—Coming now to the part that carelessness plays in the insurance world, we discover a serious state of affairs. Here again we must sub-

mit to a rigid self examination and be made to realize our individual responsibility.

**27. The Number of Fires.**—Stand in front of your clock and watch the minute mark, say to yourself another fire has broken out, somebody's home, some child is being terribly burned—then add: It could have been prevented. That is the way it goes minute by minute, hour by hour, all through the year. There are 1,440 minutes in the twenty-four hours and there are 1,500 fires each day. There will be 1,500 tomorrow and 1,500 the day after, and these have not yet occurred and would not if people would be careful. Our per capita fire loss is four times as high as that of France and twenty times as bad as that of Holland.

**28. The Cost of Fires.**—It is not merely the number of fires. It is the damage they do. The government reports state: "The loss by fire is greater than the combined value of the production of all our gold mines, silver mines, copper mines and oil wells each year." That was bad enough, but the report went on to say that the same fire tax is greater than the value of all the land and improvements of any of the following states: Maine, West Virginia, North Carolina, North Dakota, South Dakota, Alabama, Louisiana, or Montana. Like feeding one of these great states into a fire each year. Fires cost New York four and one-half times as much as they do London.

**29. They Can be Prevented.**—The National Board of Fire Underwriters makes a study of hundreds of thousands of fires. In one year they found that 28.9 per cent of all American fires came from a strictly preventable cause, while 47.8 per cent were partly preventable and 23.3 per cent came from unknown causes, which probably were largely preventable. These figures prove that the United States with all its advantages is a nation of careless people. We burn up our homes, risk our lives, and give away our most valued possessions all because of our carelessness. And in our business life this negligence increases the cost of our insurance, and increases taxes, so that the cost of this increased overhead is reflected in the cost of everything we buy.

**30. The Number of Accidents.**—What has already been said about fire and theft prevention might also be said about the prevention of accidents. Every eighth man in the United States gets hurt in some way, and every tenth man dies in an accident.

**31. Cause of Accidents.**—Carelessness, of course, is the cause of nine-tenths of the accidents which occur. They could all be prevented.

a. The automobile is the most dangerous place to be because more people are hurt in automobile accidents than in any other way. Properly handled, however, the motor car is by far the safest means of travel at our command.

b. Next in number of accidents come those in the home, and there is very little difference between the two. Insurance Companies pay five times as much to people hurt in their own homes as they do to people hurt on trains or steamships.

c. A good many people are hurt in games and recreations, most of which could be avoided by proper training and care.

d. Travel on railroads and steamships is comparatively safe judging from the small number of accidents occurring there in proportion to others. The employees of the carriers are paid to protect the lives of the passengers and most of the accidents occur to people when they are violating the rules.

e. The least number of accidents happen to people who are riding bicycles, motorcycles, and in horse-drawn vehicles, due no doubt, to the reduced speed and the fewer hazards.

**32. The Cost of Accidents.**—Industrial accidents alone in the United States cost more than one billion dollars every year. Think of it! A loss of over a billion dollars in this enlightened day and age. This is the estimate of Sidney J. Williams, Secretary of the National Safety Council who investigated over three million industrial accidents in one year, causing an actual loss of 296,000,000 working days, not to mention hospital and doctor bills. Small wonder that the rate on accident insurance is growing higher year by year. Another authority puts the total cost of accidents in America for one year at $2,250,000,000.00 and adds the following facts:

a. Nine out of every ten accidents could be prevented.

b. Fifty-four automobile smash-ups every hour, three-fourths of them happening at a rate of speed under 15 miles per hour.

c. The average automobile with brakes in perfect order cannot stop short of 20 feet if traveling 15 miles per hour.

d. Every 108 minutes someone is killed in an automobile accident.

e. Out of 10,555 deaths due to automobile smashups in New York State only 700 were due to careless driving and only 850 to defective mechanism. Over 9000 of these deaths were caused by careless pedestrians.

**33. Who Pays the Losses?**—Here are three men, Smith, Jones and Brown. Smith owns a beautiful home in the suburbs, Jones possesses many valuable family gems, and Brown drives a Twin Six. Because they believe in playing safe, Smith buys fire insurance on his house, Jones takes out a burglar policy and Brown has his automobile insured against theft. "Surely," they say, "we have done our duty as good citizens. Let the insurance company worry."

**34. Playing Safe.**—And because they know that the Insurance Company will shoulder the blame, Smith allows a lot of broken furniture, old newspapers, oily rags, worn out clothing and other junk to accumulate in his basement and attic; Jones frequently leaves his house unlocked, is careless about the servants he employs, and never notifies the mail man, milk man or paper boy when he goes on his vacation and Brown never takes the trouble to lock his car or purchase an auxiliary lock. Consequently in the course of a few months the house burns down, the family jewels disappear, Brown is walking to work, and the Insurance Company pays the bill.

**35. Who Really Pays.**—But did you ever stop to think who really pays? The rates charged by Insurance Companies are based on the total yearly losses they sustain. The more losses, the higher the rates for Smith, Jones and Brown. The higher the rates for Smith, Jones and Brown, the higher these rates become for everybody—for you and me. And so in the end we all have to pay for the carelessness of others.

**36. Crime Begets Crime.**—Criminologists tell us that when personal carelessness makes crime easy, the number of criminals increase. Soon other cars are stolen, more homes are burglarized, the community gets a bad name and the insurance rates on theft and burglary advance by leaps and bounds. In addition the state is overburdened with the cost of punishing criminals, and taxes increase proportionately.

**37. Everybody Loses.**—The results of carelessness are borne by all. Smith, Jones and Brown think they are good citizens. But are they? Ask yourself that question when you pay your next insurance or tax bill.

**38. Your Insurance Agent.**—Turn your insurance problems over to a good agent. He can tell you which companies can best serve your particular interests. Find out what you have to insure, how much you ought to carry, and what conditions you must comply with. A real insurance counsellor will give you the following complete service:—

a. He will make a study of your problems and furnish you with the least possible number of policies that will safeguard your interest without overlapping or causing needless expense.

b. He will place your insurance in companies of assured financial stability and with long standing reputations for prompt and fair settlements.

c. He will have experts inspect your property, calling attention to hazardous conditions, and suggesting ways for their improvement, thereby enabling you to secure the lowest possible rate on your insurance.

d. He will watch the value of your property as it fluctuates from month to month and notify you whenever he finds that you are carrying more insurance than you need, or less than you would require in case of loss.

e. In case of loss he will prepare the necessary papers and secure the quickest and best possible settlement of your claim.

f. He will notify you well in advance of the expiration of your policy.

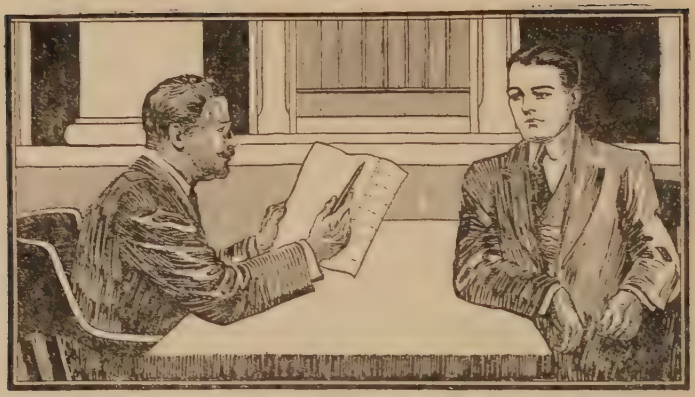
g. Many accommodating agents will rewrite a policy and carry it at their own risk and expense for a few days in case you neglect to authorize a renewal.

h. He will keep you informed of any changes in underwriting practices, policy changes, and any other insurance developments that may affect your interests.

**39. In Conclusion.**—Let us re-emphasize the importance of full understanding the terms of an insurance agreement. You would not think of entering into an ordinary contract without reading it. Why should you do so with your insurance? You cannot afford to buy protection that does not protect, or insurance that does not insure.

## HOW TO AVOID BAD INVESTMENTS

**1. Investment.**—There is a successful doctor in a certain small town in Illinois whose investment experiences illustrate and emphasize the different points to be brought out in this chapter. Almost ten years ago he became interested in stocks for the investment of his surplus funds. He made a study of the automobile industry, saw its vast possibilities, watched its phenomenal growth, and finally purchased small blocks of stock in several well established automobile and tire manufacturing corporations. The results were success-



ALWAYS SEEK THE BEST INVESTMENT ADVICE.

ful in a moderate way and he was able to double his capital in a very few years. After a similar investigation of the mining industry he put his money into copper and silver with equally gratifying results.

2. Speculation.—And then the oil craze struck him. Along came an oily tongued orator from Louisiana who claimed to have a marvelous instrument for locating pools of oil thousands of feet under the ground. He pictured the millions of dollars in profits growing where but one had grown before, and the good doctor swallowed hook, sinker and line. He sold his other holdings, borrowed money from his local bank thereby securing a controlling interest in The Louisiana Mineral Corporation. Losses, taxes, interest, assessments and dry holes have been his portion ever since.

3. Delusions.—Now, it happened that the doctor had a host of friends among his patients, most of whom had that strange ambition to make a lot of easy money. Having unlimited confidence in the ability, judgment and integrity of their family physician, they, too, gathered together a hundred dollars here and a hundred there, so that practically the entire capital stock was held right there in that little town. When the break came and one loss or disappointment followed another, is it any wonder that in addition to his direct loss in dollars and cents the doctor lost not only the respect and confidence of his patients, but their patronage as well?

His was a three-fold loss—his capital, his reputation, and his business.

4. **The Result of Experience.**—A prominent and influential banker in Chicago boasts that it cost him over one hundred thousand dollars to learn the value of money, and the principles of safe investment. Another admits that he has enough worthless oil and mining stock certificates to paper his office walls. These men have profited by their mistakes. They may have lost large sums but in doing so they gained the knowledge and experience necessary for their ultimate success. And in the present day and age their errors make it easy for us to avoid the common pitfalls, and to get from our investments a maximum return with a minimum risk.

5. **Reasons for Bad Investments.**—It would be a superhuman task to describe all the reasons for investment losses. There are, however, certain fundamental reasons such as the lack of expert knowledge, lack of legal regulation, dishonesty, poor management, greed, salesmanship, and tips, all of which are considered below in the order of their importance.

6. **Lack of Expert Knowledge.**—The story of the doctor illustrates this point better than any other. His original ventures were successful because he knew the facts about the different corporations, and could understand and appreciate the basic conditions in the industry. On the other hand his later experiences only served to show that it does not pay to plunge into the water until you know its depth and its temperature. Had he seen fit to make a study of the oil industry in Louisiana and a careful investigation of the character of his new associates, the story might have been different.

7 **The Lack of Legal Regulations** is responsible for much of the investment loss. Some states have rigid corporation laws, others have practically none. Some states have adopted what is known as the blue sky law prescribing certain requirements with which stock promoters must comply. The pity of it all is that even under the most rigid state laws, mistakes do occur, and even with a national blue sky law, it would be a physical impossibility to fully protect the investing public. Folks simply will not be legislated into making wise investments any more than they can be legislated into doing good or being good. But if we must have legal regulation, let us have a National law which will pro-

tect the investor in every State and place all stock issues on an equal footing, regardless of location.

**8. Dishonesty and Poor Management.**—Many a corporation with the most brilliant prospects for success falls by the wayside because of inefficient or dishonest management. Investors, both large and small, are inclined to overlook this important consideration or else to take the salesman's word for it. The common stock of many concerns represents not tangible assets but the good will and earning power of the organization. The hope of future profits, therefore, rests on the ability and integrity of the officers.

**9. Greed.**—The failure of many investors is due to their greed. Perhaps they have heard the story of the lawyer who helped organize the Ford Company, and whose annual income today runs up into the millions, or of the original stockholders in various corporations where $100.00 invested twenty years ago is worth a quarter of a million now. Their zeal for the unearned profit leads them to take all manner of chances with their hard earned dollars. Or perhaps they are anxious for profits but unwilling to run the risk of losses, and it often happens that even in the legitimate markets they drop out at the first sign of flurry or set back. They watch the temporary fluctuations rather than the long swings.

**10. Salesmanship.**—Clever salesmanship is responsible for innumerable bad investments. Many a hard working individual is induced to draw out his savings by the apparent sincerity of the salesman, and the promise of fabulous profits in the future. Most wildcat propositions are promoted by men having no means of their own, and even if successful are so managed as to give the insiders all the profits.

**11. The Fallacy of Tips.**—And finally we come to the question of "tips" or confidential scraps of information. A New York broker tells the story of a customer who ran wild one day on rumors. "A man gave me an order to buy a thousand shares of Erie at the market. The order was executed at 94. I had no sooner bought it than the stock went down. My customer returned and ordered the stock to be sold. It was then 92½. In half an hour it was bought back again at 95. After consulting with other friends he ordered it sold again, this time at 90. Finally he came into the office and said 'I first saw one man who told me to buy,

and then another who told me to sell. I understand one is called a 'bull' and the other a 'bear.' I don't know much about these names but I do know, now, that I am a jackass.'" This affords a good illustration of the way the average speculator is harassed and perplexed in Wall Street. A tip coming from the highest or from the lowest source should be taken for what it is worth, and that is usually nothing.

12. **Profitable Investments.**—Having discussed the reasons for investment loss, let us look on the brighter side for a moment, and try to outline a plan for successful operation. First let us find out what the word finance really means.

13. **What Finance Does Not Mean.**—The possession of wealth does not make a man a financier, any more than a kit of tools makes a mechanic. Finance does not mean speculation—although speculation has a legitimate place in the economic life of the country. It does not mean fleecing the public, nor parasitically fattening off the industry and commerce of the country. Neither can it be held responsible for the exploits of a man who, having made money in other ways comes into the market and goes on a financial spree.

14. **What Finance Does Mean.**—Finance means constructive work. It means mobilizing and organizing the wealth of the country. It means the promotion of trade, and the continuous study of world conditions. It creates new wealth and makes new jobs for workmen.

15. **The Evil Results of High Finance.**—The popular idea of high finance is that it is a holdup, and it must be admitted that most of the notorious swindles in this country have been called high finance by the newspapers. For instance, when J. P. Morgan bought a street railway for five million and sold it for fourteen million to the New Haven which he controlled; or where The Standard Oil people paid $39,000,000 for a group of mines and unloaded $61,000,000 worth of water onto the public; or when Edward J. Addicks loaded a bonded indebtedness of $4,500,000 onto a $500,000 corporation; or when Mr. Ponzi sold stock and guaranteed 400 percent profit; or when Joseph Leiter's gambling in wheat caused a great rise in the price of bread in Europe and brought riots and bloodshed in Italy. Applied in these instances, the term "High Finance" is a misnomer. In legitimate meaning it designates the most eminently respectable and trustworthy financial operations.

**16. The Markets.**—There are five principal markets in the United States, the New York Stock Exchange, the New York Curb Market, the Chicago Board of Trade, the New Orleans Cotton Exchange and the New York Cotton Exchange. The New York Stock Exchange is an unincorporated voluntary association which has 1100 members and has been in existence since May 17, 1792. One hundred million dollars worth of business is often transacted on the floor of the exchange in a single day. The New York Curb Market is an outside market where stocks are bought, and sold in companies whose stocks for some reason or other are not listed on the New York Exchange. The Chicago Board of Trade is the greatest grain market in the world. The cotton of the country is marketed almost entirely through the Cotton Exchanges of New Orleans and New York.

WHERE HANDS ARE ELOQUENT.

**17. The Partial Payment Plan.**—Small investors are able to buy odd lots of high grade investment securities on the payment plan. The purchaser makes an initial deposit, say 20% of the total amount, and agrees to pay the balance in monthly installments. The broker advances the required balance on the securities, has the stock registered in his own name, and borrows what is necessary from his bank, depositing the stock as collateral. From the individual's standpoint this plan has many advantages, among them:—

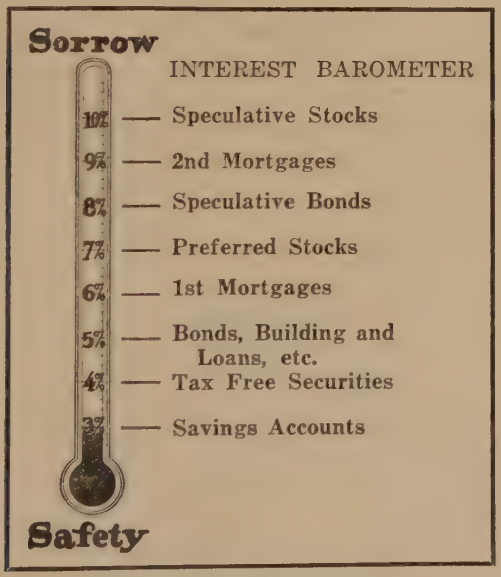
a. It has all the advantages of a marginal transaction without the danger of being sold out.

b. It enables the small investor to buy good stocks at favorable prices and with a very small expenditure of capital.

c. It enables the investor to so distribute his holdings that a loss in one investment may mean a corresponding gain in another.

Like all other good things the payment plan is likely to be abused. It may be used by the broker to secure needed funds, or he may disappear with the funds in his possession. The unreliable firm may give incorrect prices or "bucket" the order altogether, that is, not buy the stock at all. And finally the plan may also be used to induce reckless speculation on the part of those whose means would not permit speculation by the ordinary method.

18. Buying on Margin.—In marginal transactions most of the necessary funds are borrowed. Suppose Mr. Henry Rennels desires to buy one hundred shares of Anaconda copper which is selling at a par of $100.00. The least margin any reputable broker will accept is $10.00 per share, so Mr. Rennels puts up his check for $1,000.00. The broker buys the 100 shares on the floor of the Exchange. At the close of




INTEREST BAROMETER

the day he must be able to pay for the shares which means an expenditure of approximately $10,000.00 (100 shares at $100.00 each. In order to raise this amount the broker arranges with his bank to accept the shares after they are bought, as collateral for a loan which on standard stocks will be about 80 percent of the market value, or on this transaction, $8,000.00. This leaves a balance of $1,000.00 which the broker must pay out of his own funds. If the stock within a short time goes up say 10 points, fortunate Mr. Rennels will perhaps give an order to sell, and the broker will secure about $11,000.00 for the block. With this he repays the bank loan of $8,000.00, reimburses himself for his loan of $1,000.00, and after deducting interest on the $9,000.00 supplied by the bank and by himself, and deducting his brokerage charges, he turns the rest over to Mr. Rennels. On the other hand if the stock goes down seven or eight points the broker calls for more margin or failing that he sells the stock, repays the bank loan, reimburses himself, deducts interest and brokerage charges as before and returns to Mr. Rennels anything that may happen to be left of his $1,000.00.

**19. Selling Short.**—Now we will say that Mr. Rennels chooses to sell on margin, or "sell short," as they say in Wall Street. He deposits his $1,000.00 as before and instructs his broker to sell short 100 shares of Anaconda copper. The broker sells the 100 shares on the floor of the exchange and is called upon to make delivery at the end of the day. As neither Mr. Rennels nor the broker owns the stock that has been sold, it is necessary for the broker to borrow from some owner. He does this in the "loan corner" of the Exchange where stocks are loaned to shorts on payment of the market price. THIS LOAN IS REALLY A SALE. It is provided, however, that on return of the stock the amount paid for the stock will be given back. This borrowed stock the broker uses to make delivery. If within a few days the stock goes down, Mr. Rennels orders his broker to buy a block at the lower price. This stock repays the lender of the stock with which delivery of the stock was originally made. The broker turns over to Mr. Rennels his $1,000.00 margin plus the difference between the price at which the block of stock was sold, and the price at which it was bought less the brokerage charges. Mr. Rennels will also get credit for whatever dividends may

have accrued on the borrowed block of stock while in the hands of the broker. On the other hand, if the stock goes up several points, the broker will call for more margin; failing that he will buy a block of stock with which to repay the stock he has borrowed, will deduct from the margin the difference between the price at which the stock was sold, and the price at which it was bought, together with interest and brokerage charges, crediting the stockholder with any dividends that may have accrued on the stock while in his hands, and will then return to poor Mr. Rennels anything that may be left of his original $1,000.00.

**20. Kinds of Investments.**—There are three great classes of securities with which the investor should be familiar, investment securities, speculative securities, and wild cat securities. The purchaser of investment securities usually must content himself with a low rate of interest such as is paid on government bonds, real estate mortgages, properly secured corporation bonds, preferred stocks, and the like. The low rate of interest is acceptable because of the safety. Speculative securities include the common or unsecured stocks of reliable corporations with a good dividend record, or the prospect of future payments. Their market value often fluctuates violently but as a rule they yield a much higher rate of interest than do purely investment securities. And finally there is always a large class of wildcat investments being offered the public. Some are frauds, some partly fraudulent, and all are risky. They promise to pay big dividends but as their management is likely to fall down, and as they are not listed in any exchange, the careful business man does not regard them as satisfactory investments. The failures greatly outnumber the successes.

**21. How to Make Money in Wall Street.**—To the question, "How can I make money in Wall Street?" there is probably no better answer than the one given by old Meyer Rothschild to a person who asked him a similar question. He said, "I buy 'sheep' and sells 'dear.'" Those who follow this method always succeed. There has never been a year when there have not been two or three "set backs" in the markets when it was possible to purchase stocks, grains, or cotton at prices below their intrinsic value. The depression usually passes over in a few days and then the lucky or far-sighted buyer, as the case may be, comes in for his profits. The question of making money then becomes a mere matter of

calculation, the amount depending on the number and seriousness of the squalls. If young men had only the patience to watch the speculative signs of the times, to observe the old veterans of the Street in panic times coming out of their shells of security and purchasing good stocks to the extent of their bank balances, it would be possible for them to realize a net gain of 50% of their year's investments.

**22. When to Sell.**—The great majority of occasional speculators select the buying side of the market. On the other hand the professional trader buys and sells with every turn of the market. The former makes money only on a rising market. The latter gets his profits on both rising and falling markets. If the public was educated to buy at the right time and to sell at the right time, the professionals in Wall Street would soon be forced out of business.

**23. How to Buy and Sell Grain.**—Some years ago the estate of a wealthy old member of the Chicago Board of Trade was being settled up and among the papers found in his safety deposit box was a plain slip of paper with the following strange characters:

| Wheat | |
|---|---|
| Sell Jan. 10 | Buy Feb. 21 |
| Sell May 10 | Buy July 1 |
| Sell Sept. 10 | Buy Nov. 28 |
| **Corn** | |
| Sell May 10 | Buy Mar. 1 |
| Sell Aug. 10 | Buy Jan. 25 |

An examination of his accounts showed that as nearly as it was possible to express it, this was his plan of buying and selling grain. And going back over the fluctuations in past years it developed that his formula was practically bullet proof. He had not always bought at the bottom and sold at the top but almost invariably he had realized a good profit on his transactions.

**24. What to look for in An Investment.**—Every legitimate investment offering has been subjected and passed through the following test proceses:—

a. Common sense judgment which includes a careful consideration of such questions as:

1.—is the product a good one?
2.—is there a market for it?

3.—is the location favorable for freights, labor, etc?

4.—Is the management capable and honest?

b. The audit which enters into

1.—the cost of production
2.—the selling costs
3.—the assets
4.—the earnings.

c. The appraisal which is done by independent disinterested authorities, and places an unbiased valuation on

1.—the real estate and buildings
2.—the machinery
3.—the good will.

d. The legal details covering question of

1.—titles to properties owned
2.—incorporation
3.—proper authorization of the issue by those in authority.

Not one man in ten is capable of conducting a thorough investigation of an investment offering. An analysis of any proposition based on the above formula will show up its short-comings if any exist, and prevent losses which might otherwise have resulted from too hasty action.

25.—**The Value of the Broker's Knowledge.**—The common delusion that expert advice is not required in speculation has wrecked many fortunes and reputations. When a man wants correct advice in law he hires a good lawyer. When he is sick and wants medical advice he consults a good doctor. When, therefore, a man wants expert advice on investments why does he take the word of a bar-room bum rather than that of a broker whose business it is to know all there is to know about investments, and whose success depends on his ability to give real service. Too many investors are like the man in an important case who acted as his own lawyer and finally admitted that he had a fool for his client. A reliable broker can tell you the inside information concerning corporations such as the outstanding stock, the bonded indebtednes, par value, dividend rate, volume of business, orders on hand, condition in the industry, character, standing and ability of the officers, prospects of futuro

disbursements, and countless other facts you would never dream of asking. A salesman offering an untested security acts in the capacity of a broker. His character, standing, and past experience should be carefully looked up.

**26. Statistical Organizations.**—Then there are other companies organized to serve the public solely in an advisory capacity. They plot out the fluctuations in commodity prices, stock exchange prices, and general business conditions over a long period of years. They call attention to the long swings and the short swings, and to the certainty of high prices following low prices. They offer at a stipulated price a complete investment service telling their subscribers when to buy, when to sell, and what particular stocks or bonds to buy or sell. While not aways correct, their forecasts are frequently of value.

**27. Warning.**—Every man who expects to invest in securities should be warned against bucket shops, and swindling brokerage concerns. Whatever money is turned over to them never gets out of their own pockets. It always pays to select an establishment having a reputation for giving sound advice, one with effective resources for supplying correct information, and one having a personal interest in making money for the client.

**28. The Reason for Markets.**—The mere mention of the word "finance" brings to the average mind a scene of riotous gambling, and wild, unreasonable speculation. The stock exchanges, boards of trade, cotton exchanges and other general market facilities are in no sense gambling institutions. They are legitimate marts of trade where men in active business find an outlet for the investment of their surplus funds, and where they can realize on their holdings on short notice at a price quoted every day. For these two reasons if for no other, the markets claim a very important place in our economic life.

**The Cost of Trading.**—The following tables show at a glance the minimum amount of money that must be put up when stocks are bought or sold on margin, also the commission charged by brokers for buying or selling stocks, bonds, grain, and cotton:

## Open Account Requirements.

**Stock Exchange and Curb Market**

| Stocks selling per share | Margin per share |
|---|---|
| Under $15.00 | 33 1/3% |
| $15.00-$25.00 | $ 5.00 |
| 25.00- 75.00 | 8.00 |
| 75.00-100.00 | 10.00 |
| 100.00-125.00 | 15.00 |
| 125.00-150.00 | 25.00 |
| Over $150.00 | On request |

**Grain and Cotton Futures**

In buying and selling grain the brokers require a cash deposit of from 2c to 5c a bushel, as a margin.

On the cotton exchanges with a quiet, normal market prevailing, a nominal margin of $2.00 per bale is required. This margin varies according to trade conditions.

## Commission Rates.

**Stock Exchange**

| Stocks selling per share | Commission per 100 shares |
|---|---|
| Under $10.00 | $ 7.50 |
| $ 10.00-$124.00 | 15.00 |
| 125.00 or over | 20.00 |

On the New York Curb there is a minimum commission charge of $2.00.

**Curb Market**

| Stocks selling per share | Commission per 100 shares |
|---|---|
| Under 50c | 2% |
| $ .50-$1.00 | $1.00 |
| 1.00- 3.00 | 4.00 |
| 3.00- 5.00 | 5.50 |
| 5.00-10.00 | 7.50 |
| 10.00 or over | Stock exchange rates. |

**Grain Pits.**

The following figures show the commissions required for what is known as the "round turn," that is, for both buying and selling a certain amount of grain.

| No. of bushels | Commission |
|---|---|
| 5,000 | $12.00 |
| 10,000 | 24.00 |

**Coton Exchange**

| Cotton selling per pound | Commission per 100 bales |
|---|---|
| Under 13c | $10.00 |
| 13c-25c | 12.50 |
| 25c-30c | 15.00 |
| 30c-35c | 17.50 |
| 35c-40c | 20.00 |
| 40c-45c | 22.50 |
| 45c-50c | 25.00 |

In selling grain and cotton the Government tax is 2c on every $100.00 realized.

## HOW TO AVOID BUSINESS DEPRESSION

**1. The Richest Country in the World.**—The United States has been continually growing richer. The per capita wealth of this country is greater by far than that of any other country in the world. Formerly we owed vast sums of money to other countries while our railroads, mines and national resources were in a large measure owned by foreign capitalists. Today we are a great credit nation with all the rest of the world owing us millions of dollars. We have a new flexible banking system which releases sufficient funds

in the right place and at the right time. We have standardized our industries. A great merchant marine carries our products to the ends of the earth. Millions of dollars formerly spent for alcohol is now put into circulation in the pur-

THE TRAGEDY OF THE SHUT-DOWN

chase of homes, merchandise and better living conditions. And yet in spite of all these stabilizing factors, in spite of our unlimited wealth and vast national resources, our periods of great prosperity are inevitably followed by a corresponding depression.

2.—**History of the Ups and Downs.**—The following figures prove the instability of our prosperity:—

| | |
|---|---|
| 1893-1897 | depression |
| 1898-1902 | prosperity |
| 1903-1904 | depression |
| 1907 | severe panic |
| 1910-1912 | prosperity |
| 1913-1916 | depression |
| 1917-1920 | prosperity |
| 1921-1923 | depression |

**3. The Cost of Changes.**—These changes are uneconomical and they cause intense suffering. When business is good wages increase, the standard of living increases, manufacturing facilities are increased, and everybody is happy in an orgy of spending. Then quite suddenly the pendulum

swings back, business falls off, wages are reduced, the cost of living is supposed to come down, but doesn't, factories are idle, strikes break out, and everybody stops spending. It is almost impossible to estimate the cost of these readjustment periods in dollars and cents. The American people paid dearly for the great prosperity which was theirs in 1917, 1918 and 1919.

**4. The Laboring Man,** flushed with hitherto unheard of wages thought that at last he had come into his own. Every time the pay was raised the length of the working day was cut down. The shorter the working day the more time remained for recreation. The more time for recreation the greater became the demand for luxuries. Consequently the working man as a class made hay while the sun shone, but he made the wrong kind of hay. Instead of saving his surplus, he purchased silk shirts and expensive clothes, and rode to work in his own automobile. As a result when the break came he found himself invested with a lot of expensive tastes, and without either sufficient income to keep up the payments on the new victrola or the automobile, or a sufficient savings fund to tide him over the hard times.

**5. The Farmer** had more to contend with than any other class. It is true that during the time of war prices he received good prices for his produce, but these prices were not out of proportion to the increase in the cost of production or in the cost of living. But when the drop came, the farmer was the first to suffer. While the cost of living remained practically the same the farmer's wheat dropped from $3.00 to $1.00 per bushel; his corn from $2.00 to 60 cents; his cotton from 43 cents to ten cents a pound; his wool from $1.00 to 30 cents and so on down the list. In other words, the farmer produced a crop under war time conditions of high rents, high wages and high overhead expenses, and had to accept pre-war prices for it. Farms which had been purchased at from $400.00 to $600.00 per acre would not pay interest on a $200.00 valuation. The renter who paid $15 to $20 per acre was forced to move. And to cap the climax, the farmer was obliged to pay 15 cents for an ordinary 5 cent loaf of wheat bread, $10.00 for a $5.00 pair of shoes or $50.00 for a $25.00 suit of clothes. His total loss simply staggers the imagination.

**6. The Manufacturers** likewise failed to profit by the past. When war contracts were the order of the day and salesmen

got writer's cramp from writing out orders, manufacturers doubled and tripled their capacity. Apparently nothing could ever happen to the boom of prosperity. But something did happen and suddenly the farmer and the salaried man and the wage earner quit buying and many of these giant temples of industry are standing idle today or have been converted to other uses.

**7. The Stock Market.**—It is interesting to note that prices on the New York Stock Market have always been an indication of the trend of business conditions. Periods of inflation and depression have there been forecast with unfailing accuracy months in advance. Thus the high point in stock prices was reached in 1916 in spite of the great prosperity which reached its height in 1918 and 1919. The low point is always reached very early in the period of depression and the average price begins to go up when the depression seems to be at its lowest point.

**8. To End Business Depression.**—Thus we have seen that in spite of the sound basic condition of the country, we do have alternating periods of prosperity and depression, and that these periods of readjustment cost the people of the United States millions of dollars. The next question is how can these things be regulated or prevented? They can be regulated by a plan of action in which each of us has a definite part.

**9. The Wage Earner's Part.**—Labor is the great conqueror, enriching and building up nations more surely than the proudest battles. Labor is the basis of all wealth for of what use were our most valuable natural resources if undeveloped by the hand of labor. But this very fact puts a great responsibility on those of us who are wage earners. We must give an honest day's work for an honest day's pay. In our selfish ambitions we must not overlook the duty and the responsibility we owe to others.

**10. The Farmer's Part.**—The farmer is already helping to stabilize the economic conditions of the country. He so diversifies his crops that the possibility of a complete crop failure is now altogether remote. His next great problem lies in the field of marketing. Under existing conditions the farmers of the U. S. sell 75% of their grain immediately after the harvest, so clogging the railroads and the markets that they are obliged to take the bottom price for the year, in fact, any price that the commission men and jobbers feel

inclined to pay. Could not this grain be stored in co-operatively owned elevators and released to the buying public at a fair and uniform rate and in accordance with the law of supply and demand? The fruit grower's association, the wool pool, the dairy marketing companies and the co-operative live stock commission houses are steps in the right direction. The farmer is making strides. His efficiency and his equipment have increased. The National and State Governments maintain large and effective experiment stations to guide him both in production and distribution. All these factors tend to provide the stability so greatly needed in our time.

**11. Manufacturer, Merchant and Jobber.**—The employers of labor have a duty to perform not only to the laboring men themselves, but to the public. It is the duty of honesty. Is it honest for those of us who are manufacturers to refuse to accept orders unless they are on the expensive, unfair cost plus basis? or to close down our plants to avert a temporary loss? or to force prices up unfairly? or to wilfully cancel our contracts? Haven't we as merchants and jobbers forgotten that our aim in life is to serve the public, and not to selfishly extract the last full measure of illicit profit?

**12. The Government's Part.**—Vast sums of money are expended annually by the government to improve the physical condition of the people. Bulletins are issued covering almost every conceivable phase of scientific and agricultural activity. But unfortunately, the powers above have overlooked the field of business endeavor. Famine and plague are things of the past, but hard times still follow inevitably in the wake of prosperity. Business must be taught to diversify its interests just as the farmer has been taught crop rotation. Business failures must be made as impossible as crop failures, panics as unheard of as yellow fever epidemics. Business men can be educated in the better methods of trade, just as the farmer has been taught better agricultural methods.

**13. The Consumer's Part.**—And finally, we come to the individual. What can he do to promote economic stability? In the first place we can develop the fidelity, industry, thrift and skill which are so essential for the foundation of permanent prosperity. Secondly, we must bear in mind the fact that over production simply means the production of the wrong thing in the wrong place or at the wrong time. And

in the last place we must realize that we, as ultimate purchasers have the power to determine the nation's production, and govern our purchases accordingly.

14. **United Action.**—If each one of us could recognize and perform his duty, the time would soon come when hard times would be forgotten and we should enter upon such a period of permanent prosperity as has been the theme of all political parties since time immemorial.

## HOW TO REDUCE TAXES

1. **Taxes, Definitions Of.**—Taxes are assessments of money against persons or property, for public uses. A **direct tax** is levied directly on the people. An **indirect tax** is levied against goods for which the purchaser must pay. A **poll tax** is a tax levied against voters. An **excise tax** is an inland tax levied on commodities of home production and consumption. A **customs duty** is a tax on imported or exported goods. **Internal revenue** is a tax levied on tobacco, cigars, etc. **Income tax** is levied against persons whose income exceeds a certain amount. **Property tax** is levied against property, real or personal.

2. **Excessive Taxes.**—Many people are paying more in taxes than their proportionate share, because of ignorance of the law. Accurate knowledge is necessary in order to properly file a personal property or an income tax return. A careful study of the following pages will supply the required information.

3. **Property Taxes.**—In those states still using the old cumbersome and inefficient property tax, this is the usual form of procedure.

a. All the property subject to tax is valued.
b. The total amount of money to be raised is fixed.
c. The total amount of money to be raised is then divided by the total valuation of the property, the result being the rate of taxation, or the sum to be raised on every dollar's worth of property.

Now, it makes no difference whether the valuation of the property is placed higher or lower than the actual value, because the rate of tax depends entirely on this valuation. It is of great importance to the individual tax payer, however,

that the valuation of his individual property is neither higher nor lower than that of others.

In most States there is a County Board of Assessors, or Board of Review which is authorized to correct valuations. An individual believing himself overtaxed can and ought to apply to this Board for justice.

**4. Double Taxation.**—This same property tax gives rise to a situation in which the same piece of property is taxed twice. Suppose a man buys a farm for $15,000.00 and gives back a mortgage for $10,000.00. He has an equity of but $5,000.00 in the farm and yet he pays a real estate tax on the whole $15,000.00 valuation. On the other hand, the holder of the mortgage is required to pay a personal property tax on the $10,000.00 mortgage. The $15,000.00 farm actually pays taxes on a $25,000.00 valuation.

**5. The Widow and Orphans** are the chief sufferers under an unjust taxation system of this kind. When a man dies his estate usually goes through the courts. Its exact size and value becomes public knowledge and the taxes are assessed accordingly. Suppose among the assets there is a cash item of $1,000.00. This is taxed to the limit despite the fact that the total amount of cash listed in tax statements throughout the great State of Illinois, for example, is only a very few thousand dollars. In one year alone, there were less than five hundred watches listed and less than 100 diamonds in Illinois. It is an unjust system, one that makes liars out of otherwise perfectly respectable citizens.

**6. The Income Tax.**—The United States Government adopted the Income Tax as a wartime measure, to raise funds necessary to the conduct of the war and other regular governmental expenses. It proved to be so just a method of raising revenue, and so popular that it is evidently with us to stay. And now the more progressive States are gradually abandoning the old Property Tax and are adopting a limited income tax plan of their own to take its place.

**7. Its Faults.**—However, there are certain faults which must be remedied. In the first place, the income tax return is rather a complicated affair. It requires no small degree of time and effort, and is likely to cause considerable confusion. Secondly, the tax payer must have a thorough understanding of the law itself, and of the numerous rulings pertaining thereto, in order to file a satisfactory return. And in the third place, the technical nature of the information

required, in nearly every case necessitates the hiring of paid assistants. Every banker, lawyer and accountant is drafted into the service for weeks and months before the returns must be filed. This is especially true among the big corporations whose accounting problems require the service of an expert. There are not half enough certified public accountants in the country to fill the demand for them at this crucial time.

8. **How You Lose, Mr. Tax Payer.**—It is not our desire or intention to criticize the Federal income tax law. It is the most equitable revenue producing method ever adopted by the American people. It takes the money from those who are best able to pay. But corporations, business men and individuals are paying more money for the preparation of their returns, and are actually paying more taxes than is really necessary, for the following reasons:

a. Because they do not take time to master the fundamental principles of the law and its application to their particular problem.

b. Because they do not make their books of account conform to the requirements and divisions of the income tax return.

c. Because they probably are carrying on their books a lot of doubtful accounts and considerable merchandise which is obsolete or not readily salable.

9. **A Study of the Law** and the instructions on the back of the blank will reveal sufficient information so that you can file a true and accurate return. If you neglect to learn, it will cost you money. For instance, one woman's income was derived chiefly from her husband's estate and she had paid an annual income tax amounting to about $100.00 for several years. The lawyer who had always assisted her in filing the return happened to be away one year so she decided to do the work herself. Now, it so happened that she had a few shares of stock in her local bank and upon inserting the figures she noticed that she paid no normal tax on dividends. Like a flash it came to her that at least half of her husband's income was derived from bank stock and dividends from corporations, and was therefore not subject to income tax. Had she taken the trouble to look into the matter sooner she could have saved one-half of her tax.

10. **Proper Books of Account** are a valuable asset when the time comes for making out your income tax return. Many

merchants and business men keep but a haphazard record during the year and then expect some one to file an intelligent return for them in an hour or two. The first great care of business men should be to adopt a standard system of accounting, based on what experience tells is the most efficient in filing income tax returns. Accounts in your records should agree with and depend upon the various subdivisions of the income tax return. Then when the unpleasant but necessary duty of filing your return must be taken care of, your work will consist of a simple transfer from one account to another. Corporations quite generally have adopted this plan and there is no real reason why it cannot be carried out just as successfully by the partnership or individual.

**11. Inventory and Bad Debts.**—Every time you pay a dollar of tax on a stock of obsolete or unsalable goods, or on a doubtful book account, you are needlessly taking a dollar out of your pocket and making a present of it to Uncle Sam. These are allowable deductions and should be charged off your books as such. Suppose you have $1500.00 on your books, $1000.00 of which you are sure to collect. Charge off the other $500.00 to loss and claim that amount as a deduction on your income tax. Do not abandon your efforts at collection for fear that you will defraud the government, because if you do collect in the money, it will show again as a profit on your books the succeeding year. The same rule applies to obsolete merchandise, patents, printing plates, dies, or to anything else which is really a loss, but still shows on your books as an asset.

**12. Tax Free Securities.**—The issue of tax exempt securities has grown to such tremendous proportions that immense fortunes have been withdrawn from industry and invested in such a way that the incomes derived from them are almost entirely free from taxation. This works a double hardship on the average man in that it increases his tax burdens without giving him a chance to increase his earning power.

**13.**—These are but a few examples of actual loss. The following complete income tax guide has been prepared by experts. It deals primarily with the preparation of personal income tax returns, and contains information and helps not ordinarily available to the layman. No attempt is made to assist in the filing of tax returns for corporations, who as a general rule hire their own tax experts.

It is hoped that this department will save readers of the Business Guide many hundreds of dollars in attorney's or accountants' fees.

For example, if you fail to find below the answers to your individual questions, you need not go to the trouble or expense of hiring an attorney or an accountant to assist you. In each Internal Revenue District, the government maintains an office with an expert in charge. There you may obtain, at no cost, any information you desire.

Or put your income tax problems up to the publishers of this book. Accurate and reliable information will be given absolutely free. Any reader of the Business Guide is entitled to this service.

**14. Where and When to File.**—Income tax returns must be filed with the Collector of Internal Revenue for the district in which the taxpayer resides, or has his principal place of business on or before March 15 of each year or within two months and fifteen days following the close of the established fiscal year of taxpayer.

If the address of the collector is unknown, ask at your postoffice or bank. If you have no legal residence or place of business in the United States forward your return to the Collector of Internal Revenue, Baltimore, Md.

**15. Who Must File.**—Every citizen of the United States, whether residing at home or abroad, and every person residing in the United States, though not a citizen, whose gross income for the taxable period amounted to $5000.00, or whose net income amounted to

a. $1500.00 if single, or if married and not living with husband or wife.

b. $3500.00 if married and living with husband or wife.

Husbands and wives may file singly or jointly. Form No. 1040 (not 1040A) must be used for all single returns. The income of a minor or incompetent, if derived from a separate estate under control of a guardian, must be reported by the legal representative.

All corporations, partnerships and fiduciaries must file.

**16. Forms to Be Used.—Form 1040** is to be used where net income is more than $5000 (before deducting personal exemption and credits); where combined income of husband and wife making separate returns is more than $5000; in all cases where net income is derived from business or profession, including farming, regardless of amount.

**Form 1040A** is used where income is less than $5000 and is derived chiefly from salary or wages.

**Form 1040 F.Y.** is used by individuals whose accounting period ends with a month other than December and by those reporting on a calendar year basis if any income is derived from a partnership, estate or trust using a fiscal year.

**Form 1120** is used for every domestic or resident corporation, joint stock company, association or insurance company not specifically exempted by the revenue act.

**Form 1120A** is used for corporations filing tax returns for a fiscal year.

**Form 1065** is used by partnerships to report income paid by the partnership to the individual partners.

**Form 1041** is used by fiduciaries in reporting income distributed to beneficiaries. The above forms are all to be sent to the District Collector.

17. **Penalties.**—For wilful failure to make and file a return on time not more than $10,000 or imprisonment for not more than one year, or both and in addition, 25 per cent of the amount of the tax.

For wilfully making a false or fraudulent return not more than $10,000 or imprisonment for not more than 5 years, or both and in addition 50 per cent of the tax.

For deficiency in the tax, interest on the deficiency at 6% per annum to the date the deficiency is assessed and in addition 5% of the deficiency if due to negligence or intentional disregard of rules and regulations without intent to defraud, or 50% of deficiency if due to fraud.

18. **Returns of Information at Sourse.**—All persons making payments to another of fixed or determinable income of $1500 or more, most render a return thereof on or before March 15 of each year on Form 1099, together with a letter of transmittal on form 1096. Full instructions are printed on these forms.

**Form 1097** is used for reporting dividend payments of $500.00 or more to stockholders of domestic and resident corporations.

**Form 1100** is used by a person doing business as a broker to show names and addresses of customers to whom payments were made or for whom business was transacted and other information called for on the form.

**Forms 1099, 1096, 1097** and **1100** are all sent to Commissioner of Internal Revenue, Sorting Section, Washington, D.C.

**When to Pay Income Taxes.**—Income taxes may be paid in four installments, but if any installment is not paid on the date it is due, the whole amount of the unpaid tax must be paid upon notice and demand from the collector.

Interest of 1% a month is also charged on past due installments.

**19. When to File Separate Returns.**—A husband and wife each having a separate income may file either separate or joint return at their option.

A joint return is advantageous:

a. If either has sustained a net loss.
b. If either has made contributions in excess of the limitation of 15 per cent of the net income.
c. If either has credit for tax paid at source in excess of tax liability.
d. If either has received dividends or other income exempt from normal tax but has sustained losses which reduce the taxable income to such an extent that a material part of the benefit of the credit against normal tax would be lost if separate returns were filed.

**20. Exemptions and Credits.**—The following personal exemptions and credits for dependents are allowed:

Citizens or Residents:

a. Single person $1500
b. Married person living with spouse $3500.
c. Head of a family $3500
d. Estates $1500
e. Corporations $2000-$3000
f. Non-resident aliens $1500.

A credit of $400 for each dependent is allowed to citizens or residents of the United States and to non-resident aliens who are residents of Canada or Mexico.

**21. The Normal Tax** applies at the same rate to all individuals and is 1½% on the first $4000 in excess of exemptions and credits, 3% on the next $4000 and 5% on the remainder of the net income.

**22. The Surtax** rates begin with 1% at $10,000 and end with 20% on incomes of $100,000 or over, as follows:

## SURTAX RATES

| A | B | C | D | A | B | C | D |
|---|---|---|---|---|---|---|---|
| $10,000 | ..... | ..... | ..... | $44,000 | 11 | $440 | $2240 |
| 14,000 | 1 | $40 | $40 | 48,000 | 12 | 480 | 2720 |
| 16,000 | 2 | 40 | 80 | 52,000 | 13 | 520 | 3240 |
| 18,000 | 3 | 60 | 140 | 56,000 | 14 | 560 | 3800 |
| 20,000 | 4 | 80 | 220 | 60,000 | 15 | 600 | 4400 |
| 22,000 | 5 | 100 | 320 | 64,000 | 16 | 640 | 5040 |
| 24,000 | 6 | 120 | 440 | 70,000 | 17 | 1020 | 6060 |
| 28,000 | 7 | 280 | 720 | 80,000 | 18 | 1800 | 7860 |
| 32,000 | 8 | 320 | 1040 | 100,000 | 19 | 3800 | 11660 |
| 36,000 | 9 | 360 | 1400 | 100,000 | 20 | ..... | ..... |
| 40,000 | 10 | 400 | 1800 | ..... | ..... | ..... | ..... |

A. Net Income. B. Rate %. C. Surtax. D. Total surtax.

| NET Income | TAX RATES (Highest Applicable Rate) Normal | Surtax | NORMAL TAX | AMT. OF TAX Surtax | Earned Income Credit | TOTAL TAX |
|---|---|---|---|---|---|---|
| $ 1,000 | ..... | ..... | ..... ..... .... | ..... ..... | .. .... | ..... ..... .... |
| 2,000 | ..... | ..... | ..... ..... .... | ..... ..... | .. .... | ..... ..... .... |
| 3,000 | ..... | ..... | ..... ..... .... | ..... ..... | .. .... | ..... ..... .... |
| 4,000 | 1½% | ..... | $ 7.50 | ..... ..... | $1.87 | $ 5.64 |
| 5,000 | 1½% | ..... | 22.50 | ..... ..... | 5.62 | 16.88 |
| 6,000 | 1½% | ..... | 37.50 | ..... ..... | 5.62 | 31.88 |
| 7,000 | 1½% | ..... | 52.50 | ..... ..... | 5.62 | 46.88 |
| 8,000 | 3% | ..... | 75.00 | ..... ..... | 5.62 | 69.38 |
| 9,000 | 3% | ..... | 105.00 | ..... ..... | 5.62 | 99.38 |
| 10,000 | 3% | ..... | 135.00 | ..... ..... | 5.62 | 129.38 |
| 15,000 | 5% | 2% | 355.00 | $ 60 | 5.62 | 409.38 |
| 20,000 | 5% | 4% | 605.00 | 220 | 5.62 | 819.38 |
| 25,000 | 5% | 7% | 855.00 | 510 | 5.62 | 1,359.38 |
| 30,000 | 5% | 8% | 1,105.00 | 880 | 5.62 | 1,979.38 |
| 35,000 | 5% | 9% | 1,355.00 | 1,310 | 5.62 | 2,659.38 |
| 40,000 | 5% | 10% | 1,605.00 | 1,800 | 5.62 | 3,399.38 |
| 50,000 | 5% | 13% | 2,105.00 | 2,980 | 5.62 | 5,079.38 |
| 60,000 | 5% | 15% | 2,605.00 | 4,400 | 5.62 | 6,999.38 |
| 70,000 | 5% | 17% | 3,105.00 | 6,060 | 5.62 | 9,159.38 |
| 80,000 | 5% | 18% | 3,605.00 | 7,860 | 5.62 | 11,459.38 |
| 90,000 | 5% | 19% | 4,105.00 | 9,760 | 5.62 | 13,859.38 |
| 100,000 | 5% | 19% | 4,605.00 | 11,660 | 5.62 | 16,259.38 |
| 1,000,000 | 5% | 20% | 49,605.00 | 191,660 | 5.62 | 241,259.38 |

**23. Corporation Tax.**—Corporations now pay a straight tax or 12% on their net earnings with an exception of $2000.00 or $3000.00 if earnings are less than $25,000.

**24. Partnerships, Trusts and Fiduciaries** pay no income taxes, although they are compelled to file returns showing the distribution of net income. The Beneficiaries include such income in their individual returns.

**25. Change of Status During the Year.**—If an individual changes his status during the taxable year the exemption allowed must be pro rated. In other words if a tax payer marries on April 5th his exemption for the first three months of the year is ¼ of $1500 ($375) and for the remainder of the year ¾ of $3500 ($2625) or $3000 in all. The fractional part of the month is disregarded unless it amounts to more than half a month, in which case it is considered a whole month. If an individual dies during the taxable year, personal exemption and credits are determined by his status at time of death, but the surviving spouse, if any, is allowed full credit according to his or her status at the close of the taxable year.

**26. Division of Exemptions.**—Personal exemption of $3500 may be claimed by either spouse or divided in any proportions desired. It is usually taken by the one paying normal tax in the higher bracket. Credit for dependents cannot be divided. It must be taken by the one contributing chiefly to the support of the dependents.

**27. Head of a Family.**—The treasury department has defined the head of a family "to be an individual who actually supports and maintains in one household, one or more individuals who are closely connected with him by blood relationship, relationship by marriage or by adoption and whose right to exercise family control and provide for their dependents in based upon some moral or legal obligation."

**28. A Dependent** is one who is under 18 years of age or incapable of self-support because mentally or physically defective, dependent upon the tax payer and receiving from him the chief support on the last day of the taxable year. The credit for dependents is determined by the status of the tax payer on the last day of the taxable year.

**29. Earned Income.**—The new Revenue Bill increases the amount which can be considerd as earned income from $20,000 to $30,000. As part of this income may be subject to surtax, the new statute limits the amount of earned income credit to 25% of the normal tax plus 25% of the surtax which would

**COMPUTATION OF TAX** (See Instruction 22 as revised)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 19. Earned Net Income (not over $20,000) | $ 20000 00 | 30. Net Income (Item 18 on return) | | 273,315 00 | 41. Normal Tax (1½% of Item 37) | $ 60 00 |
| 20. Less Personal Exemption and Credit for Dependents | 4700 00 | 31. Less Dividends (Item 7 on return) | 25000 00 | | 42. Normal Tax (3% of Item 39) | 120 00 |
| 21. Balance (Item 19 minus 20) | $ 15300 00 | 32. Interest on Liberty Bonds, etc. (Item 8) | 1000 00 | | 43. Normal Tax (5% of Item 40) | 1730 75 |
| 22. Amount taxable at 1½% (not over the first $4,000 of Item 21) | 4000 00 | 33. Personal Exemption | 3500 00 | | 44. Surtax on Item 18 (see Instruction 22 as revised) | 46323 00 |
| 23. Amount taxable at 3% (not over the second $4,000 of Item 21) | 4000 00 | 34. Credit for Dependents | 1200 00 | | 44a. Tax on Net Income (total of Items 41, 42, 43, and 44) | $ 48233 75 |
| 24. Amount taxable at 5% (balance over $8,000 of Item 21) | 7300 00 | 35. Total of Items 31, 32, 33, and 34 | | 230,700 00 | 45. Adjustment for Capital Gain or Loss (12½% of Column 9, Schedule D) | 9125 00 |
| 25. Normal Tax (1½% of Item 22) | $ 60 00 | 36. Balance (Item 30 minus 35) | | 42,615 00 | 46. Total of or difference between Items 44a and 45 | $ 57358 75 |
| 26. Normal Tax (3% of Item 23) | 120 00 | 37. Amount taxable at 1½% (not over the first $4,000 of Item 36) | | 4,000 00 | 47. Less Credit of 25% of Tax on Earned Net Income (Item 29) | 191 25 |
| 27. Normal Tax (5% of Item 24) | 365 00 | 38. Balance (Item 36 minus 37) | | 38,615 00 | 48. Total Tax (Item 46 minus 47) | $ 57167 50 |
| 28. Surtax on Item 19 | 220 00 | 39. Amount taxable at 3% (not over the second $4,000 of Item 36) | | 4,000 00 | 49. Less Income Tax paid at source (2% of Item 3a) | 80 00 |
| 28a. Tax on Earned Net Income (total of Items 25, 26, 27, and 28) | $ 765 00 | 40. Amount taxable at 5% (balance over $8,000 of Item 36) | | 34,615 00 | 50. Income and Profits Taxes paid to a foreign country or U. S. possession | — — |
| 29. Credit of 25% of Item 28a (not over 25% of Items 28, 41, 42, and 43) | $ 191 25 | | | | 51. Balance of Tax (Item 48 minus Items 49 and 50) | $ 57087 50 |

NOTE.—The above Instructions and Computation of Tax should be retained with the duplicate copy of your return. The following copy must be detached and securely affixed at the foot of the first page of your original return and filed with the Collector of Internal Revenue for your district. 1—13336

**30. Computation of Tax.**—Let us take the case of a married man with three minor children and a net income of $273,315 after deducting interest, taxes, losses, contributions and other deductions authorized by law. The accompanying illustration shows FIRST (Lines 19 to 29) how the earned income credit is figured, $191.25, carried forward to line 47, and SECOND (Lines 30 to 51) just how the normal tax and the surtax are arrived at. A practical example like this will clarify matters far better than several pages of lengthy explanations. (Note that the earned income credit is now $30,000).

be payable if the tax payer's earned net income constituted his entire net income.

**31. Taxable Income.—**

Annuities (amount received by purchaser or grantor in excess of cost)
Annuities (entire amount received by donee beneficiary)
Bad debts recovered
Baptismal fees
Bequest, devise or inheritance (profit on sale of property received through)
Bets won
Bonus from employer (unless gifts)
Bonds (without conversion privilege converted)
Business, income from
Commissions received or available
Compensation received in securities or property at fair market value at time of receipt
Compensation earned abroad by citizen, a bona fide nonresident for less than six months during taxable year
Compensation earned in the United States
Compensation for services rendered in previous year
Compensation on profit sharing basis
Compensation received by wife or minor child
Condemnation proceedings, (profit on property taken, unless reinvested in property for like purpose)
Damages (business or profession)
Dividends:
So-called from savings bank
Liquidating, taxable as capital gains if assets held two years
From building and loan association in excess of $300
Domestic corporations from earnings since Feb. 28,1913
Foreign corporations earned after Feb. 28, 1913, as limited.
Joint stock land banks
Insurance policy, paid up
On employers' stocks before title vests in employee
Share of, received by partnership, estate of trust
Stock dividends, gain on sale of
Stock dividends redeemed
Discount on bonds and mortgages (when raelized)
Estates or trust, income from
Fees of receivers in bankruptcy, Federal court
Gain from sale or exchange of property
Unemployed benefits received from labor unions
Usurious interest received
Wash sales (thirty-day sale and repurchase profit taxable)
Gain from sale of capital assets (as limited)
Gambling (gain from)
Gifts (income from)
Gifts (profit from sale of)
Income from business or profession
Income from partnership, estate or trust
Illegal transactions (gain from)
Improvements made by lessee

(income to lessor to extent of value at completion subject to lease)
Insurance (proceeds of endowment policy in excess of premiums paid in)
Interest from building and loan association in excess of $300.
Interest on bank deposits
Interest on foreign government bonds, including Dominician Republic
Interest on income tax refunded
Interest on notes, mortgages and corporation bonds
Interest on savings bank deposits
Jury fee (Federal court)
Legacy (profit from sale of)
Liberty bond interest above exemptions
Pensions, Federal (other than for military or naval service during the war)
Pensions for war services received from Great Britain by British subject residing in United States.
Prizes (in contests, holders of winning numbers, etc.)
Profession, income from
Real Estate (profit from sale of)
Refund to bondholders, normal tax in excess of 2% paid at source.
Rents received
Residence property (profit from sale of)
Royalties received
Salary received or available
Stock dividends (profit from sale of)
Stocks, bonds, etc. (profit from sale or exchange of)
Stock rights (profit from sale of)

**32. Non-Taxable Income.—**

Alimony
Annuities (return of cost to purchaser)
Annuities (amount received by purchaser or grantor in excess of cost)
Annuities (entire amount received by donee beneficary)
Bequest, devise or inheritance (value of property received through)
Bequest in lieu of executor's commission
Bonds converted (with conversion privilege)
Compensation earned abroad by a citizen a bona fide nonresident for more than six months
Compensation of officer or employee of a state or political subdivision thereof—county, city, etc.)
Compensation contingent as to payment (not reportable until it becomes a legal liability to employer)
Damages received:
  Alienation of affections
  Defamation of personal character
  Personal injury
  Slander
  Surrender of custody of minor child
Dividends:
  Federal Land Bank
  From building and loan association not exceeding $300 annually
  Nat. Farm Loan Association
  Of domestic corporations,

paid from earnings accumulated prior to March 1, 1913.
Fed. Intermed. Credit Bank
Insurance policy not paid up
Federal Reserve Bank
Liquidating return of capital
Fees of receivers in bankruptcy (State Court)
Gifts received
Income tax refunded
Insurance proceeds, health or accident policy
Insurance received on death of insured
Insurance received under employees (Liability)
Interest from building and loan associations up to $300 for the year
Interest on bonds of the United States possessions
Interest on Federal Farm loan bonds
Interest on postal savings certificates on deposit
Interest on municipal bonds (state, county, city, etc.)
Interest on United States bonds issued prior to Sept. 1, 1917.
Interest, Federal Land Bank first mortgage notes
Interest, Joint Stock Land Bank bonds
Jury fees (state court)
Legacy received
Liberty bond interest not in
Notary fees (state com.) sions only)
Pensions, Federal (war pen- excess of exemption
Pensions received from state or from political subdivision (county, city, etc.)
Pension for war services received from Great Britain by British subject residing in United States
Rental value of parsonage furnished to clergyman as part of his compensation
Soliers' bonus (federal or state)
Stock dividends
Stock rights received by stockholders
Vocational rehabilitation act (payment)

**33. Allowable Deductions.—**

Abandoned project undertaken for profit, cost of
Accountants' fees (business matters)
Actors' costumes, cost of (if discarded within the year; otherwise subject to depreciation)
Advertising (business purposes)
Amortization
Attorneys' fees (business matters)
Automobile license (personal or business car)
Bad debts (or reserve for)
Board of trade dues
Bonus of employees (if not gift)
Business expenses
Chamber of commerce dues
Chauffeurs' license
Christmas gifts to customers or buyers
Commissions paid for collecting rents
Commissions paid on sale of stocks, bonds, etc.
Commissions paid salesmen
Contributions to salesmen
Customers entertainment expenses.

Contributions (see item 15)
Customs duties
Depletion (natural resources, oil wells, mines, etc.)
Depreciation on books and equipment (business or professional)
Depreciation on autos (to extent used for business)
Depreciation on business or investment property, including building, machinery, etc.
Depreciation on residence owned (to extent used for business or rented)
Depreication on patents and copyrights
Depreciation of leaseholds
Dog license
Dues (business and professional)
Employment fees paid to secure position
Entertaining expenses (to increase sales in business)
Fidelity bond premium
Gambling losses (where gambling is legal, elsewhere to the extent of gambling gains)
Gasoline tax
Gift tax
Income tax paid to state
Income tax paid at source, including 2 per cent on tax free covenant bonds (deduct on line 49)
Inheritance tax (state and Federal)
Interest on indebtedness paid or accrued during the year, except on indebtedness to purchase, or carry tax exempt securities (with certain exceptions)
Labor union dues
License fees (city and state)
Local benefit assessments for repairs or maintenance
Loss due to scrapping of machinery
Loss from sale of property received as a gift
Loss from sale of proprety acquired by request, devise or inheritance
Loss on sale of automobile (used for business)
Loss on sale of real property (business or investment)
Loss through burglary, theft or robbery
Loss through exchange of property acquired for profit
Loss on sale of stock dividends
Loss due to demolition of buildings (except where property acquired with that intent)
Losses on sale of capital assets (subject to special limitations)
Losses thru sale of dividends received in stock or property
Losses from fire, storm, etc., not covered by insurance
Losses incurred in any transaction entered into for profit
Money-capital tax (state of New York)
"Net loss" in trade or business as carried over from two previous years
Newspapers and magazines, etc., purchased for business purposes
Occupational license
Obsolescence (business property, real or personal)
Ordinary and necessary expenses in connection with trade, business or profession
Personal property taxes

Premium on fidelity bond
Postage, stationery, etc., for business or professional use
Professional society dues
Publicity expense, business or professional
Real estate taxes (except local benefits)
Rent of residence (to extent used for business or professional purposes)
Repairs and maintenance of residence owned (to extent used for business or professional purposes)
Rent on business property in which taxpayer has no equity
Repairs on automobile (used for business pruposes)
Repairs or maintenance on real property (business or investment)
Residence owned (depreciation and repairs on portion of house used for business or professional purposes)
Securities proved worthless
Stamp taxes
State taxes
State income tax
State (of New York) tax on foreign bankers and investors
Stock exchange initiation fee and dues
Stock transfer taxes
Stock rights, loss on sale of
Streetcar fares (business)
Taxes, except Federal income tax, local benefit assessments and proportion of foreign taxes allowed as credit
Tax on club dues
Taxes on residence owned
Taxes paid to foreign countries (except income tax allowed as credit
Taxes paid to states under secured debt laws
Taxes paid to United States possessions (except income tax allowed as credit)
Taxi fares, business purposes
Telephone charges on home telephone eliminated after July 2, 1924 (proportion attributable to business calls)
Traveling expenses (including hotel bills) of taxpayers away from home in pursuit of a trade or business
Typewriter upkeep, depreciation and supplies attributable to business use, whether used at home or in place of business
Wages paid chauffeur (proportion of time when a car is used for business
Wages paid to business employees

**34. Unallowable Deductions.—**

Additions and betterments (capital charge)
Annuities, purchase price
Advertising for employment
Alimony
Architect's fees (part of cost of building)
Attorney's fees, purchase of property, title litigation if capital charge
Attorney's fees, (personal matters)
Automobiles, cost of (capital charge)
Bank stock tax or other corporation stock tax paid by corporation without reimbursement, not deductible by stockholder.
Books of permanent value

purchased by professional or business men (subject to depreciation and absolescence)
Depreciation on automobile (not used for business)
Depreciation on personal residence
Doctors' bill
Dues (athletic or social club)
Fines for law violation
Gambling losses in United States or abroad where gambling is illegal
Christmas gifts
Commissions paid on stocks, bonds, etc., purchase
Commission on purchase of residence property
Campaign expenses (of candidate for office)
Commutation tickets (to and from home)
Contributions in excess of 15 % of taxpayer's net income, before deducting contributions
Contributions in employee's benefit associations
Cost of title guaranty
Cost of demolished buildings purchased with intent to tear down
Damages paid:
Alienation of affections.
Defamation of personal character
Personal injury
Slander
Surrender of custody of minor child
Income Tax (Federal)
Interest paid on indebtedness incurred to carry tax exempt securities
Legal fees in connection with purchase of property
Lobbying expenses
Local benefit assessments, other than for repair or maintenance
Losses incurred in transactions not entered into for profit
Loss on sale of automobile (personal car)
Loss on sale of personal residence
Loss on wash sales (securities)
Membership dues, pleasure club
Newspapers, magazines, etc. for personal use
Personal and living expenses
Premiums on life insurance policies
Rent (residence)
Repairs on personal residence
Taxes on pleasure, automobile and motorcycle
Tax on pistols and revolvers
Tax paid for another person
Taxes paid by mortgage before foreclosure
Taxi fares and street car fares (personal)
Traveling expenses of taxpayer, seeking employment
Uniforms which take place of ordinary clothing, policemen firemen, nurses, dentists, barbers, trainmen, soldiers, sailors)
Wages paid to domestic servants

35. Deductible Contributions.—

American Legion, including Women's auxiliary units
Churches (including pew rents)
City park funds
Council of Nat. Defense

Educational musical associations
Foreign cahritable organizations
G. A. R. Posts
Harding Memorial Assn.
Japanese Relief, etc.
Memorial association, maintaining educational features
Palestine Foundation Fund
Police pension funds
Red Cross
School district board of education
Societies for prevention of cruelty
Veterans of Foreign Wars
Woodrow Wilson Foundation
Y. M. C. A.
Y. W. C. A.
Y. M. H. A.

**36. Non-Deductible Contributions.—**

Associations for labor legislation
Campaign funds
City funds to induce location of industries
Clergymen (as individuals)
Family cemetery corporations
Individuals
National Dry Federation
Public school athletics

**37. To File or Not to File.**—The government has recently sent out a warning to the effect that if you are a tax dodger, the chances are about ten thousand to one that you will be caught.

Nineteen thousand men and women in the government's revenue service join in the hunt for the wilful tax evader. It is a comparatively simple matter to discover the difference between a wilful fraud and an honest error.

Moral and financial wrecks lie in the wake of income tax wrong doing. Summary or financial punishment, loss of business standing or prestige, moral and money reverses, disgrace, disaster and even death is the result.

Honesty with the government, in tax matters as in all others, is the best policy.

**38. Tax Pitfalls.**—Aside from the results of fraudulent tax returns, there are serious pitfalls for the misinformed in the new revenue laws. For instance there are certain provisions which if ignored in the organization will strangle a new business in its infancy.

This is particularly true in respect to the sections that effect the purchase, exchange or sale of property, and the organization and reorganization of corporations. These statutes have been made necessary because of the fact that certain tax dodgers sought to avoid taxation by incorporating and reincorporating, transferring property to themselves at high prices and raising the basis of cost and reducing the taxable gain in event of a sale.

## HOW TO AVOID LOSS IN BAD DEBTS

**1. The Science of Credits** is an important one. The immense losses charged off by business men every year is shown by statistics based on the Federal Income Tax Returns. And yet it is difficult to apply exact rules at all times and for different lines of business.

**2. The Credit Man.**—The aim of every business man should be to keep his losses as near the zero point as possible without needlessly limiting sales. In order to accomplish this result some one must be in charge of and responsible for credits. In large concerns there is a credit man. In the vast majority of cases, however, this duty falls on the shoulders of the proprietor himself, or on one of the officers of the corporation. Slip-shod, haphazard methods of extending credit should never be permitted. They sap the very life blood of the business.

**3. Knowledge Necessary to Credit Man.**—Where the trade is local the man in charge of credits needs to know all there is to know about the character, habits and financial condition of the purchasers. Theoretically the same thing ought to be true when a house sells its goods over an extended territory, but for practical purposes he must content himself with such general information as is available, coupled with an exact knowledge of the general financial situation in the territory covered. Every possible effort should be made to learn the particular hazards and peculiarities of the customer's business. On the other hand he must be thoroughly familiar with stock on hand, production costs and all the operative details of his own business. In addition to all these other considerations, a familiarity with the laws of finance, collection, exemption, bankruptcy and commercial paper is absolutely essential.

**4. Sources of Credit Information.**—How is the credit man to obtain all this vital information? The fundamental facts of law are all clearly treated in another section of this book. Government market and crop reports show up the light and dark spots in the general financial condition of different parts of the country. And as for the reputation, habits and financial standing of individual customers, the credit man has four different sources of information open to him, namely: the Mercantile Agencies, local banks, trade reports and salesman's reports.

5. **The Mercantile Agencies** attempt to show in book form the net worth and the credit standing of every corporation, partnership or individual doing business in the United States and Canada. These books are issued quarterly by The Bradstreet Company and by R. G. Dun & Company. While their reports are not always accurate and must be qualified by past experience and other available information, they nevertheless are an invaluable source of credit information, and give business men a great inducement to keep their commercial records clean. It must always be remembered, however, that changes in personal, location, and credit standing, change in these listings at the rate of well over 50% every year.

6. **Local Information.**—Many business houses prefer to get their credit information from local sources, such as the bankers or the attorneys in the customer's city. These are always valuable to verify the reports of the mercantile agencies, but as sources of original information they are not always reliable. Delay, partiality, enmity, inaccuracy or indifference in answering the requests for information, result far too frequently. Most banks refuse to give out credit ratings unless the individual happens to be one of its own customers.

7. **Trade Reports.**—Credit men in the same or allied lines of business often exchange credit information. Manufacturers of certain products sometimes form an association to maintain prices, and to co-operate in the manufacture and sale of their goods. The members of such an organization are always glad to exchange credit information. Some of these even go so far as to maintain what is known as a black list containing the name and address of firms who are not reliable, and every credit man has a copy of that list.

8. **Salesmen's Reports.**—Firms who employ salesmen to sell their products are in a position to get definite and reliable information on their customers. The salesman makes frequent visits, becomes acquainted with the customer, knows his reputation, observes his method of transacting business and is able to supply first hand reports not only on the customers, but on the general condition of the trade in the city and surrounding country. It does not pay to depend altogether on his reports, however, because his zeal for increased commissions might lead him to ignore the usual danger signals.

**9. Kinds of Accounts.**—**Open Account** is a term used where goods have been purchased by a debtor and charged to him on the books of the creditor. When an account has been agreed to by the debtor either written, by word of mouth, or by silence, it is called a **stated account.**

**10. Methods of Collecting Accounts.**—Now let us suppose that you have made every effort to secure accurate credit ratings on the customers you are selling and that you have taken every known precaution to eliminate the undesirables. Even under the most favorable circumstances you will have some slow or doubtful accounts, and the question arises "How can you get the money?" The law is slow, tedious, and expensive. Do not resort to it unless all else fails. The following steps are to be taken in their order to bring about settlement, peacefully if possible, but by force if necessary. But remember that if you expect a friendly settlement, and continued business you must use diplomacy and tact. Make every possible concession to avoid litigation.

**11. Step Number One.**—Send the statement when the account becomes due and payable, not on the 1st and 15th of the month. Enclose it with a friendly letter calling attention to the maturity of the bill and make it clear that a remittance is expected. Many customers must be educated to the fact that payments must be met promptly at maturity in order to maintain a good commercial rating. The following letters are suggested:

**Collection Letter No. 1**

Dear Mr. ————:

Won't you sit down, open your heart, and tell me why you don't pay our invoice?

This letter is not a dun—I dislike the word—but you have a REASON for not sending us that check which is due, according to our records.

Please tell me now.

Yours very truly,

Allow ten days for a reply and in the absence of which send:

**Collection Letter No. 2**

No answer to our note.

You're there. We're here.

A long way between.

Yet all distances are the same to this little red stamp. If you've broken a leg, had a fire, or got married, and cannot send our money, tell me the BIG REASON, and you will find us friends.

How about it?

Yours very truly,

(A 2-cent stamp is pasted on the margin of the letter.)

After another ten-day interval has elapsed send the following letter. It will bring in an astonishing number of replies:

**Collection Letter No. 3**

Washington's picture didn't come back with REASON or CHECK.

So far your friends have given us to understand that you paid your bills promptly, so we don't know whether you have died or gone out of business.

Honestly, that sale wasn't all profit; so help us save what there was before interest eats it up.

In other words

PLEASE REMIT NOW

Hopefully,

If there is still no reply, give him the other barrel and watch for results.

**Collection Letter No. 4**

If you don't intend to pay us, stall us off, or give us a reason; why not be a frank American and say so? Be courteous enough to write a few blasphemous remarks, about how mean we have treated you and close. We sent you a stamp long ago.

Really, I'm tired of seeing this old account every morning. It makes me doubt my judgment.

Come on now, be a sport. Please.

Yours in desperation,

These collection letters are short, friendly, and humorous, and yet they have the happy faculty of getting under the skin of the debtor, and convincing him of the writer's sincerity. They bring results and still maintain friendship for, and confidence in the firm.

12. **Step Number Two.**—If collection letter No. 4 does not induce a reply, then you might just as well give up all idea of a friendly adjustment. It is at this point that a sight draft is valuable. Formerly when a merchant refused to honor a sight draft, he found that such action lowered his credit standing. This is not always true today because many firms make it a positive rule never to pay sight drafts. The presentation of such a draft, particularly in a small town, where everybody knows all about the affairs of everybody else, is likely to bring some results. If possible it is always more satisfactory to draw the draft through the debtor's own bank.

13. **Step Number Three.**—After the sight draft has been drawn and refused it may be advisable to send the collection to a Justice of the Peace, or to the debtor's local bank either of whose charges will not exceed 10%. On the other hand an attorney may be able to effect a prompt settlement, his charge depending on the amount of the claim. Collection agencies using a series of letters threatening suit or attachment proceedings, or public advertisement, are often effective, but it must be understood that such a system does away with the last hope of future business. Any effort along this line is preferable to actual suit.

14. **Step Number 4.**—In order to begin suit to enforce a civil debt a complaint is filed stating the facts upon which the action is founded. The court then summons the debtor to appear and answer the charges, and the case is tried upon its merits. If judgment is rendered in favor of the creditor, the sheriff attaches, seizes and sells enough of the debtor's property to satisfy the judgment. Either before or after the judgment is actually rendered, the creditor may cause to be issued a writ of garnishment or a writ of attachment. The former attaches money or property of the debtor in the possession of a third party while the latter authorizes the sheriff to seize the debtor's property in case he is about to leave the State, abscond, or is a non-resident. Bond is necessary in both cases to indemnify the debtor against loss caused by a wrongful suit.

**15. Remember** that suit is not advisable unless the account is a large one, and all other efforts have failed. Proper care in extending credit, and a good collection system will be worth more to your business than a hundred judgments.

## HOW TO AVOID LOSS IN SHIPPING

### And Information for Shippers

The carelessness and ignorance of the Shippers and Receivers of freight are responsible for another great annual loss of time and money.

**1. Instructions for Shippers.**—When you receive an order to be shipped by freight you should comply with the following instructions:

a. See that each item is carefully checked in packing.

b. Use the utmost precaution to properly nail, seal or tie the shipping case.

c. Mark the case plainly showing name and address of both shipper and consignee.

d. Make out a uniform bill of lading in clear, legible form, and deliver to Railroad Company.

**2. Instructions for Receivers of Freight.**—Great care must

NEVER SHIP CARELESSLY PACKED GOODS.

be used in accepting freight in order that there may be no misunderstanding.

a. Remove freight promptly to avoid congestion and storage charges.
b. Examine all freight before receipting the company.
c. In case of any visible damage or loss, the agent should note same on the freight bill.
d. In case of invisible loss or damage, notify Railroad agent immediately to come and verify your claim.
e. Notify the freight agent in writing if you intend to store the cases without checking until some later date.
f. If merchandise does not check with invoice, or if it is received in damaged condition, file a claim immediately.

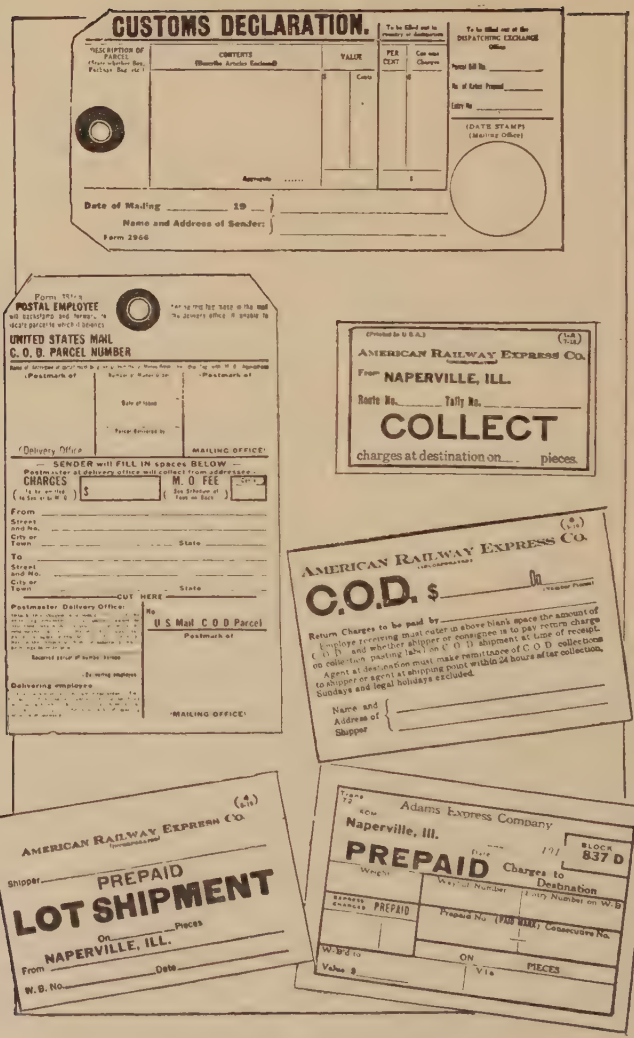
**3. How to File a Freight Claim.**—The law allows six months after date of delivery in which to file a claim on damaged merchandise and four months for non delivery of shipments after a reasonable time has elapsed. The documents required are:

a. The original paid freight bill.
b. The original invoice or certified copy.
c. The original Bill of Lading or memo.

On shipments damaged beyond repair or entirely lost you can claim full invoice value plus freight. Make an effort to dispose of the damaged merchandise and allow credit for same on your claim. This in no way invalidates the claim. Never file an excessive or unjust claim. Answer all correspondence promptly quoting file reference and furnish all available information. Be patient and trace claims every thirty days. The carrier's investigation takes anywhere from thirty to ninety days.

**4. Express and Parcels Post Claims.**—In making claim against an express company, the procedure is practically the same. The invoice or copy thereof, and copy of original express receipt are the necessary documents. The Postal Department has a standard form to be filled in and signed when making claim for lost or damaged parcels post packages.

**5. The Published Rate.**—It is very important for a shipper to consult the published rate. He cannot depend on the



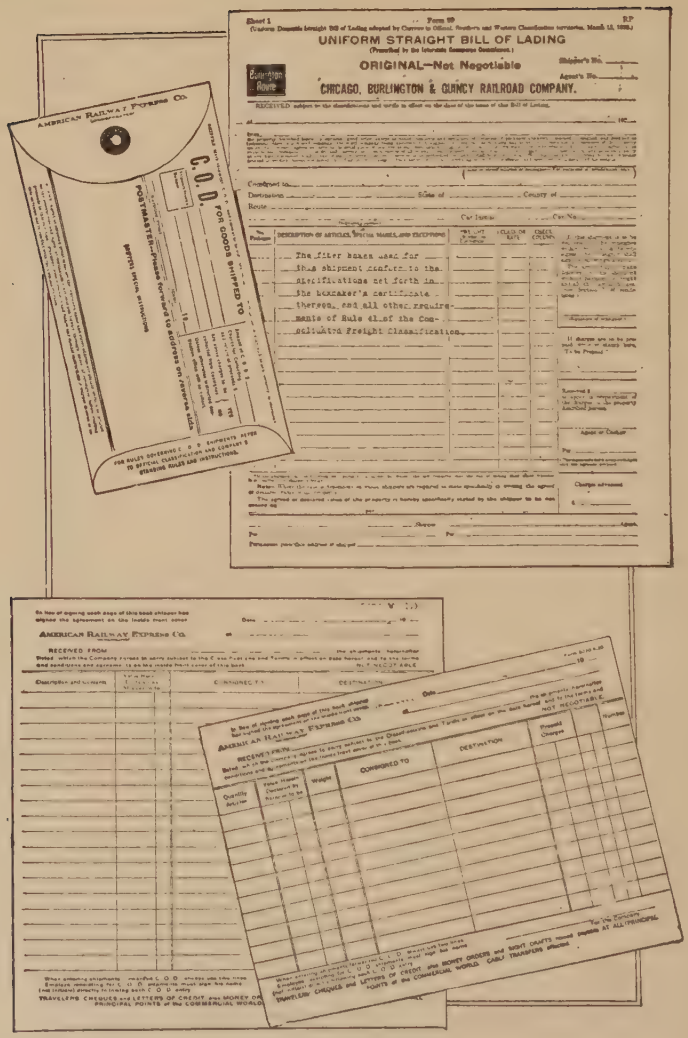

COMMON SHIPPING LABELS

statement of the Railroad agents. If the agent quotes an incorrect rate, the shipper is liable for the published rate. According to law the published rates are common documents, and the Railroads cannot charge any other rate. Ignorance of this law leads to many losses. A manufacturer puts in his bid on a certain order and agrees to pay all transportation charges. He gets the order but in making shipment discovers that he is compelled to pay a higher rate which wipes out his expected profit. On the other hand, he may figure cost too high and the order will go to his competitor who makes it his business to consult the legal published rate. Months or even years afterwards a shipper may learn to his sorrow that his merchandise has been moving under a wrong rate and be compelled to pay the difference.

**6. Correct Freight Classifications.**—According to law a shipper must make it his business to know the correct freight classifications. He should do so for financial reasons as well. It is the duty of the traffic man to know the principal classifications, and the cheapest rate under each for his goods. He should describe the shipment in the exact language of the shipment, avoiding the use of trade names. Frequently there are chances to lower freight costs by finding the best designation in each classification. Thus the rates differ for goods crated and uncrated, in packages or in bulk, set up or shipped flat, the saving running as high as 50 or 75% in many instances.

**7. Errors in Billing.**—When goods are improperly routed or sent to a wrong destination owing to the shipper's error in making out the shipping ticket or bill of lading, the shipper must pay the excess freight. This is always true when the Bill of Lading is made out incorrectly and usually so when there is an error in shipping ticket, because of the fact that the carrier relies on the accuracy of the shipping ticket to expedite the shipment. Through mistakes, shipments are frequently billed to another town of the same name in another State or in an entirely different section of the country and the difference in the cost of the freight is a considerable item.

**8. Demurrage on Car Loads.**—The Railroad allows forty-eight hours after official notice of arrival of cars in which to unload. An unloaded car standing longer than this is subject to a demurrage charge, fixed by the tariffs. No charge is made for Sundays, Holidays, or days on which it




SHIPPING RECEIPTS

rains to any extent. The charge is a just one, and the receivers of freight should empty cars promptly for two reasons, first to avoid paying the demurrage charge, and second, to release cars, enabling the carrier to reduce his fixed charges, and thus ultimately reduce the cost of transportation.

**9. The Use of Fibre Boxes.**—The following certificate must appear on shipping orders and bills of lading when goods are shipped in fibre boxes:

> "The fiber boxes used for this shipment conform to the specifications set forth in the boxmaker's certificate thereon, and all other requirements of Rule 41 of the Consolidated Freight Classification."

Failure to do this may cost you or your customer 20% more in freight charges.

## HOW TO AVOID POSTAGE LOSS

1. **Volume.**—Through its 50,000 postoffices and 40,000 rural routes it is estimated that the U. S. Postal Department handles over five billion pieces of mail every year.

2. **Losses.**—With this immense volume of business it is hardly necessary to point out that losses do occur. Valuable letters and parcels disappear, occasional delays cause inconvenience and damage, but by far the greatest loss occurs as a direct result of carelessness and ignorance, on the part of the users of the mails.

3. **The Letters That Do Not Arrive.**—Two hundred million letters are mailed every year that require special examination and readdressing by postoffice clerks before they can be delivered. The Dead Letter Office receives over sixteen and a half million letters every year. It is impossible to compute the annual indirect loss of wrongly addressed parcels and letters reflected in business and money, failure to complete deals or keep appointments. Families are broken up, lovers separated, and countless human tragedies made possible, all because of the letters that did not reach their destination.

**4. The Cost of Carelessness.**—It is estimated by the First Assistant Postmaster General, that approximately 140,000 letters bearing no address whatsoever are received every year in the Division of Dead Letters and its several

CARELESSNESS CAUSES NINE-TENTHS OF POSTAGE LOSSES.

branches. This represents an actual waste of at least $2800.00 in postage stamps alone, not to mention the value of their contents and it does not include the carloads of letters and parcels which never reach their destination on account of insufficient or incorrect addressing.

Again the receipt of postage stamps found loose in the mails would amount to about 200,000 yearly, with a nominal value of $5000.00. Carelessness in affixing the stamps is reponsible for most of this loss.

And finally by reason of insecure wrapping more than 275,000 articles of merchandise are found loose in the mails every year, and sent to the postoffices at the respective division headquarters of the Railway Mail Service. These articles include everything from jewelry to automobile tires.

The Dead Letter Office returns what it can, but the carelessness which misdirects letters is likely to record no return address with the result that millions of letters are destroyed and thousands of dollars worth of somebody's property is sold at auction.

**5. Caution.**—To avoid losses of this kind it is well to keep in mind the following suggestions:

a. Always write "Transient" or "General Delivery" on mail matter for persons not permanently located in the city addressed.

b. Be sure that name and address is given in full with street and number, postoffice box, or R. F. D. address.

c. Owing to the fact that in some states there is more than one town of the same or nearly the same name, it is always best to give the county.

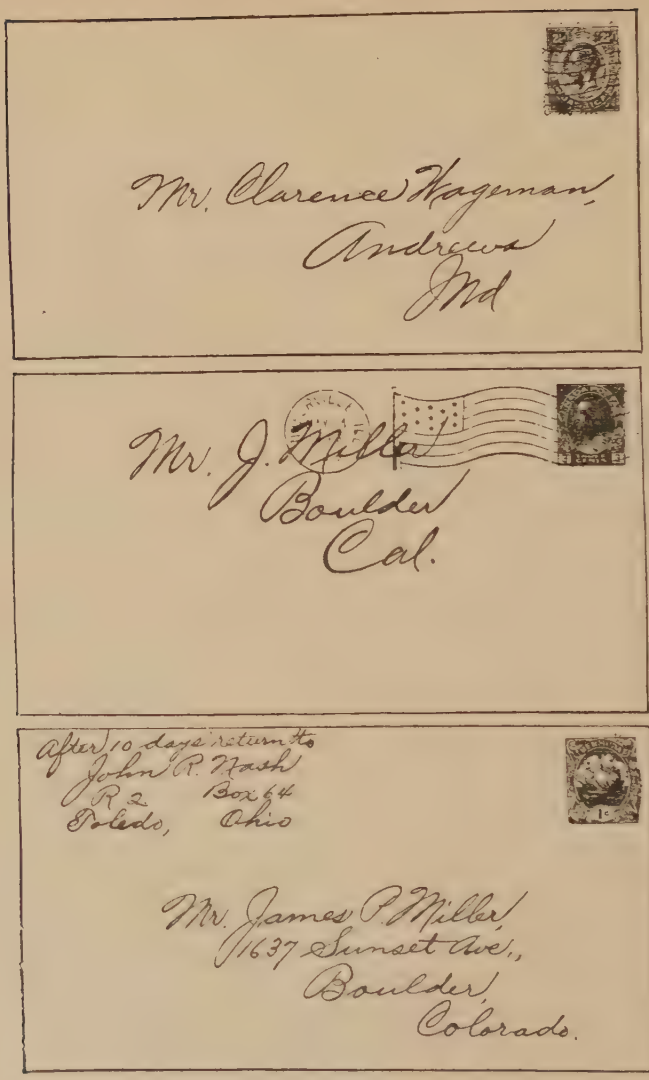
d. Do not abbreviate States. "Mo." and "Me." "N. Y." and "N. J." or "La." and "Ga." are often confused if carelessly written.

e. It is essential that mail be properly prepared for mailing. See that letters are properly sealed and parcels securely wrapped.

f. Always show the writer's specific postoffice address on the outside of outgoing mail.

**6. The Cost of Ignorance.**—Sometimes an extensive advertising campaign is launched involving the expenditure of thousands of dollars, only to be held up as violating some one of the numerous postal regulations. It frequently happens that an advertising agency will ignore the postal requirements when preparing circulars and other matter for mailing with the result that a higher rate of postage must be paid than was originally intended. Postal authorities tell us that millions of letters and parcels pass thru their hands every year which could just a well go in another class at a lower rate.

**7. The Postal Guide.**—A study of the rules, therefore, is the very first step in cutting down excessive mailing costs. This can best be done by the purchase and perusal of the Official Postal Guide, which will be sent postpaid by the Postoffice Department anywhere in the United States upon receipt of $1.00. It contains all rulings and information on postal subjects, complete lists of postoffices arranged alphabetically, by States and by Counties, together with all the latest changes. Supplements are published monthly. Some of the facts in the following pages are digested from the Postal Guide, and others are the result of practical experience in the mail order business. All will be found of value in avoiding waste and unnecessary expenditures.


Mr. Clarence Hagenman,
Andrews
Md
INDIANA OR MARYLAND?
Mr. J. Miller
Boulder
Cal.
THE WRONG WAY.
After 10 days return to
John P. Nash
R 2 Box 64
Toledo, Ohio
Mr. James P. Miller,
1637 Sunset Ave.,
Boulder,
Colorado.
THE RIGHT WAY.

### A. First Class Mail

**8. Classification.**—First class mail consists of letters, post cards, hand or typewritten communications and matter sealed against inspection.

**9. Rates of Postage.**—Letters are carried thru the mails at the rate of 2 cents per ounce or fraction thereof; government postal cards at the rate of one cent each; private post cards, standard size, at the rate of 1 cent each; larger size at letter rates.

**10. Limit of Weight** for first class matter is 70 pounds.

**11. Postage Prepaid.**—It is important that the proper amount of postage be prepaid. A piece of first class mail without enough postage is usually forwarded to destination and a postage due stamp affixed before delivery is made. In some cases, however, the addressee is notified to send the requird postage, which triples the expense and the time. A letter once removed from the regular channels of the mail is naturally subjected to more or less delay.

**12. Registry.**—All classes of mail matter may be registered upon payment of regular postage and an additional fee of 15c for value not exceeding $50.00. The fee for a valuation between $50.00 and $100.00 is 20c, for $100.00 to $200.00, 30c and increasing by 10c for each valuation increase of $100.00. The maximum indemnity is $1,000.00. The Post Office Department thereby assumes full responsibility for the safe delivery of the mail. The fee for a return receipt is 3c additional. It is always advisable to register valuable mail and to demand for a return receipt signed by the addressee. If fourth class matter is to be registered it must be sealed and prepaid at first class rates.

**13. Special Delivery.**—Letters or parcels may be sent special delivery upon payment of an additional fee of ten cents up to two pounds in weight; from two pounds to ten pounds for 15c; over ten pounds, 20c. A combination of special delivery and special handling is now accorded to second, third and fourth class mail upon prepayment of a special fee of 15c up to two pounds, 25c up to ten pounds or 35c for parcels over ten pounds.

**14. Postal Money Orders.**—The post office provides a safe

and economical means of sending money. The fees are as follows:

| | | | |
|---|---|---|---|
| Not exceeding | $ 2.50— 5c | 20.00— 40.00— | 15c |
| $ 2.50— 5.00— | 7c | 40.00— 60.00— | 18c |
| 5.00—10.00— | 10c | 60.00— 80.00— | 20c |
| 10.00—20.00— | 12c | 80.00—100.00— | 22c |

No single money order can be issued for an amount larger than $100.00.

**15. How to Avoid Excess Postage.**—Business letters rarely reach the weight limit and yet the full amount of postage must be paid on them. Circulars and other advertising matter can thus be included without extra cost. Postal cards and stamped return envelopes are frequently used when a permit for the use of a business reply card or envelope would serve the purpose admirably, the postage being payable only upon the return of the card or envelope.

### B. Second Class Matter

**16. Classification.**—Second class matter consists of newspapers, magazines, and other periodical publications which have been entered at the postoffice as second class matter.

**17. Requirements.**—Application for entry of a publication as second class matter must be made through the postmaster to the Third Assistant Postmaster General. The publications must be issued at regular intervals and sent only to persons who have paid for their subscriptions. Publications not desired may be refused by the postoffice. Copies must be complete.

**18. Limit of Weight.**—There is no limit to the weight of second class matter.

**19. Rates of Postage.**—The postage on second class matter is paid by the publisher in cash at pound rates. The advertising matter is pro-rated and goes at rates increasing from 1½c per pound in the first and second zones, to 7c per pound in the eighth zone, the zones being the same as for parcel post. All other matter in the publication is subject to a straight rate of 1½c per pound regardless of the zone. Newspapers and magazines published not for profit and by or in the interests of religious, educational, scientific, philanthropic, agricultural, labor or fraternal societies, get a re-

duced rate of 1¼c per pound irrespective of destination. Higher rates are prescribed for light weight publications. Newspapers and magazines, when mailed by the public, may be sent at the rate of 1 cent for each two ounces or fraction thereof, regardless of weight or distance.

**20. Writing on Second Class Matter.**—Writing on either the wrapper or the publication itself will subject the matter to the first class rate with the following exceptions:

a. On the wrapper there may be written or printed (1) the name and address of the sender preceded by the word "from", (2) the name and address of the person to whom sent, and (3) the words "sample copy" or "marked copy," or both.

b. On the matter itself the sender, (1) may place all the writing that is permitted on the wrapper, (2) may correct typographical errors, and (3) may designate by marks, not words, a word or passage in the text to which it is desired to call attention.

### C. Third Class Matter

**21. Classification.**—Third class matter consists of advertising cards, circulars, catalogs, and all printed matter excepting books. It includes proof sheets, corrected proof sheets, and manuscript accompanied by proof sheets.

**22. Requirements.**—Third class matter must be sent unsealed, subject to postal inspection. Circulars or printed letters must be identical. They may bear a written, typewritten, or hand stamped date, the name and address of the person to whom sent and corrections of genuine typographical errors. Any other writing subjects them to first class rates. Letters obtained by means of the printing press, mimeograph, multigraph, or similar mechanical process are mailable third class provided they are mailed at the postoffice or other authorized depository in a minimum number of 20 identical unsealed copies. If mailed elsewhere or in smaller quantities they are subject to first class rates. A clear space of not less than 3½ inches from top to bottom must be left at the right end of the address side of all mail matter for addressing, affixing stamps, post marking, and any words for forwarding or return.

23. **Rates of Postage** on unsealed third class matter is 1½ cents for each 2 ounces or fraction thereof up to and including 8 ounces in weight except that on books, catalogs, seeds, cuttings, bulbs, roots, scions, or plants (not exceeding 8 ounces) the rate is 1c for each 2 ounces or fraction thereof. Over 8 ounces parcel post rates apply.

24. Under permit, identical pieces may be mailed in bulk at 12c a pound or not less than 1 cent per piece.

25. **Writing on Third Class Matter.**—The same writing is permitted on and in third class matter as specified under second class mail. It is also permissible to include a simple dedication or inscription not in the nature of personal correspondence, such as Dear Sir, My Dear Friend, Merry Christmas, Yours truly, etc. A serial number does not affect the classification.

26. **Address.**—It is particularly important to see to it that all third class matter is carefully addressed. Directory service is not given this class of mail, so that if a specific address or box number is not given in the larger cities, the mail will be disposed of.

27. **The Use of Envelopes** of unusual size or shape is objectionable, for the reasons that if they do not fit the sorting cases, and cannot be tied into packages with regular mail, their movement is greatly delayed. Postal clerks will naturally give other mail the preference. It costs money to mail, and the returns usually depend on the promptness of the delivery.

28. **Preparation of the Mail.**—The importance of the careful preparation of mail matter has already been emphasized. In this connection attention should be called to the use of large display cards, photographs, calendars and similar matter. Cards and photographs measuring ten or twelves inches across are frequently delivered to the addressee with bent corners, because of insecure wrapping. Some business houses pay enormous prices for calendars and then mail them in tubes so frail that the string cuts through and ruins the enclosure. No matter how much money is spent or how expert the job of printing, the good impression on the customer is lost if the package does not come through in good condition.

29. **Metal Clips.**—The use of metal clips on circulars or folders should be avoided. The clips prevent the mail going through the cancelling machine and neecssitate hand cancel-

ling. In addition the clips are apt to become detached with the result that loose enclosures may be lost. The use of a paper sticker, or of the postage stamp itself is a far better method, provided of course, that the matter is not thereby sealed against inspection.

**30. The Value of a Mailing Permit.**—In mailing large quantities of third and fourth class mail, a permit is sometimes desirable. This method of mailing does away with the labor and expense of affixing the stamps. A permit of this kind may be obtained by applying at the postoffice. The number of the permit is printed on the outside of the mail matter, and the mailer pays the proper amount of postage in cash at the time of mailing. Another advantage of the permit plan is found in the fact that the mail receives less handling, reaches the addressee in better condition, and is not likely to be held up in the mails for any reason. It also removes temptation from the path of the dishonest employee.

**31. Precancelled Stamps.**—The use of precancelled stamps is still more desirable. Before they are sold the stamps are cancelled at the postoffice by printing the name of the postoffice and State across their face. This obviates the necessity of running the letters through the cancelling machine, enables the user to separate the letters by cities and states, and thus assures speedy handling and prompt delivery. There is little chance for loss by theft. By actual tests it has been found that the precancelled stamps pull almost double the number of returns as against the mailing permit. The reason for this lies in the fact that the permit immediately stamps the matter as circular matter, which should be avoided at any cost.

**32. Club Mailings.**—What has been said about getting the full benfit of postage under first class mail applies equally well to third class. The bulk rate being 12c per lb., advertisers may if they wish take advantage of the full weight. Some concerns have even conceived the idea of greatly reducing advertising costs by making up a club of ten or more mailers, inclosing a card or circular for each in the same envelope. A system of this kind has some advantage if the goods or services advertised are along widely divergent lines. Its disadvantage lies in the fact that the addressee's interest may be hopelessly divided.

**33. Mailing Lists.**—The greatest mistake any mail ad-

vertiser can make is in the use of an out-of-date or inaccurate mailing list. Of the millions of third class letters mailed every month it is safe to say that at least a quarter of them never reach destination. Think of the loss that means in business, in dollars and cents, and in wasted effort. Even the most carefully compiled list is subject to constant change and should be tested regularly by guaranteeing return postage if the mail is undeliverable. This can best be done by printing or stamping on the envelope the words "Return Postage Guaranteed," directly under the sender's return address. In the case of a permanent mailing or subscription list postmasters are permitted to correct the lists when submitted for that purpose, by crossing off the names of those to whom mail cannot be delivered or forwarded, by adding the correct street or box numbers, and similar changes. This work is done at the expense of the owner of the list by substitute clerks in first and second class postoffices at the rate of 60 cents per hour.

**34. A Real Postage Saving.**—Recent tests in direct mail advertising have developed some very interesting facts and information. For instance, it has been proven beyond all shadow of a doubt that for the average direct-by-mail advertising proposition, third class letters at 1c each will bring as many replies and as high a class of returns as the same letter or folder sent first class at two cents each. In some cases, of course, individual tests should be made because of the many factors entering into the success or failure of a campaign. In the vast majority, however, advertisers can safely reduce their postage cost 25% by sending the letters third class.

**35. The Stamped Return Card.**—Tests made in connection with the use of stamped return envelopes or cards have not established so definite a rule. A publisher seeking the renewal of subscriptions to his magazine found that with the unstamped cards his returns were 6.6% while with the stamped card they amounted to almost 17%. On the other hand a concern selling aluminum on approval made exhaustive test and finally came to the conclusion that their net returns were actually greater when they used the plain unstamped cards. This seems hard to believe and yet it proves the necessity of making accurat tests on each individual proposition. The stamped return card might easily double your

returns, but the extra expense should never be assumed until the results have been proven. A return card or envelope C.O.D. for the postage may solve your problem.

**36. Puzzle Contests.**—The recent popularity of puzzle contests has led many business houses to adopt them as trade stimulators without fully understanding the statutes and the regulations of the Department. Two fundamental principles must be observed. In the first place, contests must be free and open to everybody. It is a lottery and a violation of statute if the contestant is required to purchase any article in order to qualify. And secondly, the rules governing the contest must provide that all contestants tying for any certain prize will receive the full prize. On the other hand, it is permissible to increase the size or value of the prizes to contestants who purchase certain articles. The advertiser who ignores these principles is sure to be involved in expensive litigation and likely to suffer severe financial loss.

### D. Fourth Class Mail

**37. Classification.**—Parcel post or fourth class mail includes merchandise, farm and factory products, books, catalogs, miscellaneous printed matter weighing more than eight ounces, and all other mailable matter not embraced in the other three classes. This service reaches more places than any other transportation agency.

**38. Rates of Postage** on fourth class mail are determined by pounds and zones as per table below.

**39. How to Figure Zone Rates.**—A complete table showing the cost of parcel post shipments for each zone may be obtained at any postoffice, but a short method of figuring has been adopted by most shippers. Having weighed the parcel, and looked up the zone in the postal guide and zone key, refer to the following simple rule:

1st and 2nd zones—add to the number of pounds.....6c
3rd zone—multiply number of lbs. by 2 and add.....6c
4th zone—multiply number of lbs. by 4 and add.....4c
5th zone—multiply number of lbs. by 6 and add.....3c
6th zone—multiply number of lbs. by 8 and add.....2c
7th zone—multiply number of lbs. by 10 and add.....2c
8th zone—multiply number of lbs. by 12 and add.....1c

NOTE: Books mailed by or returned to public libraries and nonprofit organizations require only 3c for the first pound and 1c for each additional pound when addressed to the first three zones. Permit required.

These figures include service charges of 2c for the first three zones and 1c for the last five zones, which do not apply on rural route collections.

Special Handling costs 10c extra up to two pounds; 15c up to ten pounds; 20c on larger parcels. It entitles the parcel to the same handling accorded first class mail.

**40. The Limit of Weight** of fourth class mail is 70 pounds in first, second and third zones, and 50 pounds for all other distances. The combined length and girth must not exceed 84 inches. To find the measurements quickly add the extreme length to the distance once around the largest part of the package.

**41. Writing on Parcel Post Packages.**—All writing permitted in second and third classes of mail is permissible on and in parcel post packages with the following additions:

a. Written or printed bills or invoices may be enclosed.
b. Printed matter relating to an article of merchandise may also be included.
c. Letters may be securely attached to parcels provided first class postage is paid on the communication itself.

**42. Sealed Parcel Post Packages.**—Parcels of fourth class matter may now be sealed and mailed at fourth class rates provided the parcels are labeled in printing to show the nature of the contents as, for example, "BOOKS—FOURTH CLASS MAIL," together with the name and address of the shipper and the words "POSTMASTER — THIS PARCEL MAY BE OPENED FOR POSTAL INSPECTION IF NECESSARY." The same privilege should be allowed extensive mailers of third class mail.

**43. Insurance Rates.**—Parcels may be insured for certain amounts on payment of certain fees as follows:

| Indemnity up to: | Fee |
|---|---|
| $ 5.00 | $ .05 |
| 25.00 | .08 |
| 50.00 | .10 |
| 100.00 | .25 |

Return receipt, 3c—domestic destination only.

**44. C.O.D. Charges.**—Parcels may be sent collect on delivery (C.O.D.) at the following rates:

Collection up to $10.00—12c, in addition to postage
Collection up to 50.00—15c, in addition to postage
Collection up to 100.00—25c, in addition to postage

### E. Miscellaneous Rules of Delivery

45. **Husband or Wife.**—Neither husband nor wife can control the delivery of mail addressed the other, against the wishes of the one to whom it is addressed. In the absence of instruction to the contrary, the wife's letter will be delivered with the husband's mail unless they be known to live separately.

46. **Minors.**—The delivery of mail addressed to a minor is subject to the order of the parent or guardian upon whom the minor is dependent.

47. **Prisoner's Mail.**—A letter addressed to a person imprisoned to await trial, upon indictment, or pending indictment should be delivered in accordance with the order of the person addressed. In the absence of an order the mail may be delivered to the sheriff or officer in charge of the prisoner.

48. **Persons of the Same Name.**—Where two or more persons of the same name receive mail at the same postoffice, they should, if possible, adopt some form of address or other means by which their mail may be distinguished.

49. **Officials.**—Mail addressed to a public official, or to an officer of a corporation, by his title, will be delivered to the person actually holding the title, the assumption being that the mail is intended for the officer as such.

50. **Advertised Mail.**—The addressee of advertised mail of foreign origin is required to identify it and pay a fee of 1c before receiving it.

51. **Wrong Delivery.**—A person receiving mail not intended for him should return it promptly to the postoffice. If opened by mistake it should be endorsed "Opened by mistake" with the signature of the person receiving it.

52. **Delivery to Sender.**—When the sender of a letter desires to recall it, his application must be submitted to the postmaster at the office of mailing.

### F. Foreign Mails

53. The following table shows the foreign countries to which letters may be sent at the rate of 2c an ounce. It also shows the postage rates for other classes of mail.

| Letters 2c an ounce | Postal Cards | Second-Class Matter | | Ptd.matter 1c-2oz. |
|---|---|---|---|---|
| | | Postage | Limit | Limit |
| Argentina | 1c | 1c-4 oz. | 8 lbs.12 oz. | 8 lbs.12 oz. |
| Bahamas | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Barbados | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Bermuda | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Bolivia | 1c | 1c-4 oz. | 8 lbs.12 oz. | 8 lbs.12 oz. |
| Brazil | 1c | 1c-4 oz. | 8 lbs.12 oz. | 8 lbs.12 oz. |
| British Guiana | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| British Honduras | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Caicos Island | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Canada | 1c | 1c-4 oz. | No limit | 4 lbs. 6 oz. |
| Cayman Island | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Colombia | 1c | 1c-4 oz. | 8 lbs.12 oz. | 8 lbs.12 oz. |
| Cook Islands | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Costa Rica | 1c | 1c-4 oz. | 8 lbs.12 oz. | 8 lbs.12 oz. |
| Cuba | 1c | 1c-4 oz. | No limit | 8 lbs.12 oz. |
| Dominician Republic | 1c | 1c-4 oz. | 8 lbs.12 oz. | 8 lbs.12 oz. |
| Dutch West Indies* | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Ecuador | 1c | 1c-4 oz. | 8 lbs.12 oz. | 8 lbs.12 oz. |
| England | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Guatemale | 1c | 1c-4 oz. | 8 lbs.12 oz. | 8 lbs.12 oz. |
| Haiti | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Honduras (Republic) | 1c | 1c-4 oz. | 8 lbs.12 oz. | 8 lbs.12 oz. |
| Ireland | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Jamaica | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Leeward Islands* | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Mexico | 1c | 1c-4 oz. | No limit | 8 lbs.12 oz. |
| Newfoundland | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Netherlans W. Indies* | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| New Zealand | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Nicaragua | 1c | 1c-4 oz. | 8 lbs.12 oz. | 8 lbs.12 oz. |
| Panama | 1c | 1c-4 oz. | No limit | 8 lbs.12 oz. |
| Paraguay | 1c | 1c-4 oz. | 8 lbs.12 oz. | 8 lbs.12 oz. |
| Peru | 1c | 1c-4 oz. | 8 lbs.12 oz. | 8 lbs.12 oz. |
| Salvador El | 1c | 1c-4 oz. | 8 lbs.12 oz. | 8 lbs.12 oz. |
| Samoa Western (Brit.) | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Scotland | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Spain and Colonies* | 1c | 1c-4 oz. | 8 lbs.12 oz. | 8 lbs.12 oz. |
| Tobago | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Trinidad | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Turks Islands | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Uruguay | 1c | 1c-4 oz. | 8 lbs.12 oz. | 8 lbs.12 oz. |
| Wales | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |
| Windward Islands* | 2c | 1c-2 oz. | 4 lbs. 6 oz. | 4 lbs. 6 oz. |

* LEEWARD ISLANDS: Antigua, Anguilla, Barbuda, Dominica, Montserrat, Nevis, Redonda, St. Christopher or St. Kitts and Virgin Islands (British). NETHERLANDS (DUTCH) WEST INDIES: Aruba, Bonaire, Curacao, St. Eustatius, Saba, and the Dutch part of Saint Martins. SPANISH COLONIES: Balearic Islands, Canary Islands and Morocco (Ceuta, Melilla, Tangier, Alcazarquivir, Arcila Monte Arruit, Nador, Rincon de Medik, Rio Martin, Segangon and Zeluan. WINDWARD ISLANDS: Grenada, Grenadines, Saint Lucia and Saint Vincent.

The letter rate to all foreign countries and places not named in the above list is uniformly 5 cents for the first ounce or fraction thereof and 3 cents for each additional ounce or fraction thereof. The postal or postcard rate is 2 cents each. The rate for reply-paid post cards is double the rate for single post cards.

54. **Samples.**—The postage rate for samples of merchandise for all foreign countries (including those mentioned above) is 2 cents for the first 4 ounces and 1 cent for each additional 2 ounces. Limit of weight 18 ounces.

55. **Commercial Papers.**—5 cents for the first 10 ounces or less and 1 cent for each additional 12 ounces. The limit of weight is the same as for printed matter.

56. **Parcel Post.**—Unsealed packages of mailable merchandise may be sent by parcel post to foreign countries. Limits of size are greatest length 3½ feet, greatest length and girth combined, 6 feet. The postage rate for all countries, colonies and places is 14c a pound or fraction of a pound except that on parcels to Columbia, Guadeloupe, Haiti, Japan, Panama and Peru the rate is 12c a pound or fraction thereof. In addition, there are in many cases transit fees to be paid. For definite information see Postal Guide or refer to any postmaster.

57. **Prepaid Postage.**—Foreign postage should always be prepaid in stamps of the country from which the matter is sent. If not prepaid it is chargeable with double the amount.

### G. The Air Mail Service

Any mailable matter will be carried by airplane including sealed parcels not exceeding 50 lbs. in weight or 84 inches in

length and girth combined with postage at special air zone rates.

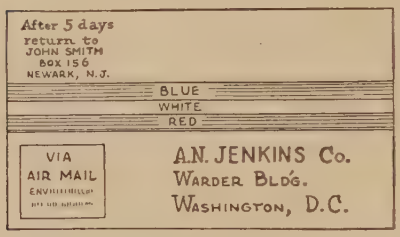



Figure 1

**58. Stamps.**—Special airplane stamps are issued but ordinary postage may be used. The airplane stamps may also be used for any other classes of mail. Air mail should be plainly marked below the stamps and above the address, as follows: "VIA AIR MAIL."

**59. Air Mail Envelopes** of distinctive design have been approved by the Department and may be used for air mail only. They must be white with three stripes running the full length of the envelope, blue, white and red as to color, these stripes not to exceed about ¼ inch in width or a total of ¾ inch for the three. They must be at least 1⅛ inches below the top of the envelope.

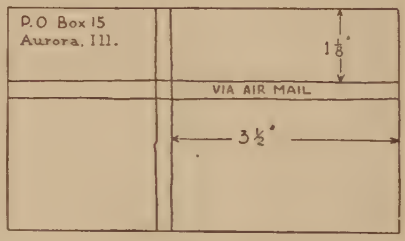



Figure 2

An ordinary envelope may be marked up with a blue pencil as shown in Figure 2.

**60. Rates of Postage.**—The rate of postage on matter carried by airplane is 5c for the first ounce and 10c for each additional ounce. This includes the transportation to and from the air mail routes. Postage should be fully prepaid but if mail bears at least 5c in postage it will be forwarded and the short postage collected from addressee on delivery.

**61. Registry, Special Delivery, C. O. D. and Insured Mail.**—Mail for dispatch by air service may be registered upon prepayment of required fees. The use of special delivery stamps in addition to the air mail postage will insure prompt delivery at office of address. The air mail service is also extended to insured and C. O. D. mail.

SECTION 3

# The Home Business College

HOW SUCCESS IS WON

BOOKKEEPING AND ACCOUNTING

SHORTHAND

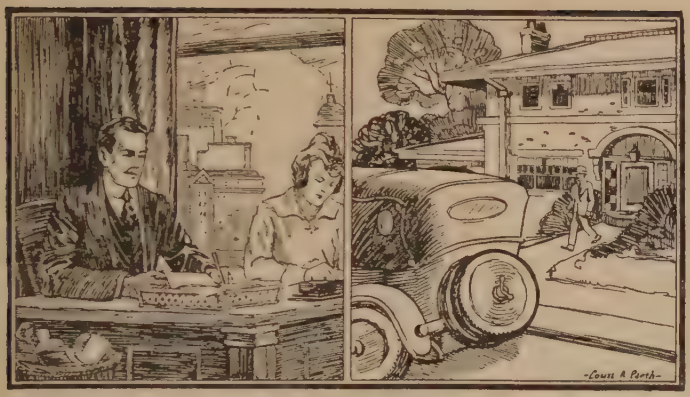
TYPEWRITING—LETTER WRITING—ADVERTISING

## EXPLANATION

THERE is no such thing as **the secret of success.** Neither is it possible to lay down a definite plan or rule of conduct to assure the prosperity of an individual, or guarantee the success of a business venture. The experiences of others, the things they have learned, and the mistakes they have made are the only guide posts we have.

The choice of occupation is of no consequence. In every line of human endeavor from the construction of mammoth engineering projects to the manufacture of chewing gum there is at least one man who is making millions.

The spirit of service, as indicated by our attitude towards our work, our relationship with others, and our reaction to life itself, is, after all, the one thing that really counts.



## HOW SUCCESS IS WON

**1. The Age of Miracles.**—We are living in an age of miracles. Every once in a while some scientist, inventor, or executive discovers a new property, process or plan which revolutionizes modern industry, and opens up countless opportunities for still greater achievements. The wildest dreams of our forefathers have become matter-of-fact realities today. We fly through the air at terrific speed, the sound of the human voice carries around the world in an instant, and we cure the most loathsome disease through simple suggestion. Who is wise enough to fortell what tomorrow may bring?

**2. Opportunities Today and Yesterday.**—And yet there are folks who long for the good old days of boundless opportunity. They go about the streets bewailing the fact that once they could have purchased Sears Roebuck at par, or that they sold the home place just before oil was discovered, or that they were unlucky enough to have overlooked some other equally glorious opportunity. They plod hopelessly along, passing up chance after chance, overlooking unlimited possibilities, and vainly seeking thruout all the world the acres of diamonds which lie unsuspected at their own back door. Their unluckiness is nothing but shortsightedness.

**3. One Thing Leads to Another.**—Where would we be today if the men who have gone before us had failed to visualize and take advantage of the possibilities of the future? The discovery of electricity, and the invention of the gasoline engine, wonderful as they seemed in the beginning, were nevertheless mere starting points. Think of the hundreds of thousands of men and the millions of dollars now employed in the business of the telephone, the telegraph and the radio, and the equally extensive development of the automotive industry in all its branches and accessories. The man who says that there is nothing left to invent or discover is a fool. His opportunities are broader than they have ever been before, in spite of what that unwise old philosopher said about opportunity knocking but once at every man's door. Some of us are so busy keeping the wolf from the door, that we haven't time to listen to opportunity's knock.

**4. The First Step.**—Now that you are no longer discounting your prospects for the future, your first step is to look around you and to find out where your best chances lie. Parents, teachers, and friends will overwhelm you with advice. Salesmen and promoters will dog your footsteps, each one with the one and only big opportunity of your life. Ignore them. Remember that your opportunity lies not so much in some remote plan or possibility, as it does in your own development. Opportunity does not come with a blare of trumpets. It is ever present but it is hidden. Sometimes it is ready made. More often you must create it yourself.

**5. The Way to Success.**—Success is another happy word for the modern American. Its appeal is common to all. And yet few of us are willing to pay the price. We do not like to forego our pleasures, or to make unreasonable sacrifices. Our most earnest plans for the future somehow seem never to materialize, with the result that before we realize it our opportunities are all in the past. History records us among the millions who wasted their opportunities.

**6. A Simple Success Formula.**—Every successful man likes to select some peculiar trait, characteristic, talent or inspiration to which he can point with pride and say triumphantly: "There! That is the secret of my success." The popular magazines are filled with feature articles and interviews, many of which convey the impression that they are intended to be good advertising, paid for at exhorbitant

space rates. Take a hundred such articles, add to them the unpublished views of another thousand successful men; scramble, boil down and classify them; and the composite result of all their experiences might well be written in less than a dozen words, viz.:

I planned
I worked hard
I served faithfully.

There you have a simple formula, shorn of all its superfluities, easily remembered, and absolutely dependable in its results. Of course some men may be born with unusual talent or genius. Others may inherit vast wealth or power. But most men have neither genius nor inherited wealth. If they succeed it must be through their own efforts. Let us see how the right kind of a plan, honest work, and faithful service will bring about the desired result.

### A. The Value of a Plan

**7. The Road Map.**—A man who starts out to see America must have some definite route over which he expects to travel, or he will get nowhere. It is just so with the traveler on the road to success. There are certain sign posts and landmarks along the way, and you must know in advance what these guides are, where they are located, and just what each one means.

8. **How Will You Arrive?**—The first of these signs on your road map ought to be your health. What will be your physical condition when you reach your destination? Will you be able to enjoy your victory, or will you find yourself but a jump or two ahead of the undertaker? You have known dozens of farmers, who after a lifetime of incessant toil, came to town, hoping against hope that they would live long enough to enjoy their dearly won leisure. Far too few of our successful business men ever live to enjoy the fruits of their labors. They keep their eyes glued so firmly on their ambition that they fail to see the danger signals all around them. If you would profit by their unfortunate experiences, plan a vigorous course of physical training and development. It can be accomplished right at home with a few minutes of your spare time, night and morning. **It can begin today.** So can a system of biologic living which requires plenty of fresh air and sunshine, and

moderation in all things, eating, drinking, sexual indulgence, and the use of stimulants. In other words you can start today to make good health the first and most important part in your success plan.

**9. Education.**—The second distinguishing landmark along the way is labeled "education." Many people still hold to the belief that a business career can be taken up when all other attempts have failed. "Well," they say, "John has made a failure of the law, and everything else he has tried. Now I suppose he'll have to go into business." This attitude is responsible for a very large percentage of failures. If you and I knew all there is to know about human life, and science and industry, there would never be any more wars or famines, or strikes or fires, or failures. We would all be successful in everything we attempted. The trouble is that we need education, not necessarily of the book and college variety, but education in its broadest sense. We can learn something every day, and from every person we meet. And the thing to remember is that knowledge picked up on the streets or in the college of hard knocks is just as valuable and just as useful, as the same knowledge gained in the schools and colleges.

**10. How Busy Are You.**—You have now determined, first to be careful of your health, and secondly to develop your success qualities through education. Both of these steps take time, and oddly enough "time" is the name of the third sign on our road map. A man can be exceptionally busy and still find time to do everything he ought to do, provided, of course, that he plans his daily work. To thousands of men such details as health and self education seem trivial and unimportant. They are like a certain merchant in a western city who insists that he hasn't time to study or read. In reality he is so busy answering the phone, sweeping out the store, dusting the counters and doing the other work of his employees that when night comes he is all fagged out. Then there is the manager of the large manufacturing concern in the same city. This man has hundreds of employees and salespeople under him, and yet he appears to have time for every detail, and for a daily round of golf. The merchant is driven by his business. The manufacturer drives his business. One is nothing but an office boy. The other is an executive.

**11. Waste Not, Want Not.**—We come now to one of the most unpopular of markers. It is the easiest to see. It is the most talked of. It is one of the most important. And yet as far as most of us are concerned, it might just as well not be there. Far too many of us ignore the great big bold-face capital letters that spell SAVE.

The reading of vital statistics makes us shudder. But the thought of being dependent on others at the age of sixty is even more distressing. The saving of money, therefore, is one of the first considerations in your success plan. Success is happiness, but happiness does not come from having everything you want. Happiness consists in having a little more than you need. Thus if a man, be he brick mason or banker, can spend a little less than he earns, he can soon build that saving into a nest egg, and a nest egg means independence, wealth, happiness.

**12. How Far Can You See?**—There may be reasons why a man in good health, with a good education, and with a keen appreciation of the value of both time and money, may still fall short of his mark. In nine out of ten such cases the reason is simply the lack of vision, and this is the last terminal. To forge ahead you must have a broad vision. You must be able to picture the future as you would like to have it, and then be willing to bend every ounce of your energy towards making that dream a living reality. Talk to the average man about a big salary, wealth or power, and he doesn't register. He lacks the vision. He must first be made to realize that his vision expands with his general growth. In other words, while a $10,000 job seems out of the question to a $1,500 clerk, yet to the $5,000 a year man it represents just another step forward.

Here then is another rule that it will pay you to put into effect today: "Visualize the future." Decide what you want out of life, and then go after it, heart and soul. If your ultimate aim seems too far away, forget it for the present, and strive for something within your reach. Then when you have reached the intermediate goal you will look back and wonder why the position just ahead ever seemed so difficult.

So much for the value of a definite plan. The best plan in the world, however, is of no practical value unless it is backed up by honest effort.

### B. The Value of Hard Work

**13. Famous Alibis.**—Alibis are counterfeit bills offered instead of the cold cash. They are reasons given for not doing a thing that could be done. The hall of Ill Fame and Failure is filled with the names of men who had good excuses for their failure. The Hall of Fame is made up of men who almost without exception achieved their success in spite of perfectly good alibis. Homer, Milton and Prescott were blind men. Desmosthenes had a three-fold alibi. His lungs were weak, he had a harsh, grating voice, and he stuttered. Julius Caesar was an epileptic. Beethoven was stone deaf before he was forty. Charles Lamb spent his 21st year in an insane asylum and the rest of his life as a clerk. Lord Byron, the poet, became a great boxer and swimmer in spite of the fact that he had a club foot. Pope was a hunchback. Carlyle had chronic indigestion and melancholia. Robert Louis Stevenson was a consumptive. Booker T. Washington was a Negro slave. Daniel Webster was too timid to recite in school. E. H. Harriman was a physical invalid. Hundreds of alibis, but never used, never thought. Compared to these circumstances our own excuses seem weak and unimportant. If hard work actually wrought such miracles in the lives of these men, think what wonders a little of the same medicine can accomplish in yours.

**14. Habit.**—The things we do today are determined by the things we did yesterday, and will in turn determine our actions tomorrow. In other words we are all creatures of habit, rather than of circumstances. Almost without exception our actions are habitual, and yet we fail to realize the tremendous importance of that fact. A man bolts his food today, because he has been in the habit of eating that way. He may make the most solemn resolutions, but the chances are that when tomorrow comes he will find himself back again in the same old rut. "How can he break himself

of the habit?" you ask. It is useless to bewail a ruined digestion, and equally senseless to set a date in the future for the reformation. The time for action is not tomorrow or the next day, but today. RIGHT NOW. Let him force himself to eat slowly today. Tomorrow it will be infinitely easier. The same rule applies to all bad habits like the tobacco or drink habit, and it also applies to the formation of good habits, such as the work habit. If you are out of the habit of giving your best to your work, make a decided change for the better today. The future will take care of itself.

**15. Postponement.**—This is a common fault. If you want to fail try putting off until tomorrow what you can just as well do today. On the other hand if you want to succeed, consider well the value of time. There is an inexhaustible market for it. Its worth ranges all the way from a dollar a day to a dollar a minute. Whenever you purchase an article of value you are buying mostly time. The manufacturer takes a few hundred dollars worth of materials and turns them into a $5,000 machine. The watchmaker buys a dollar's worth of steel and turns it into fine springs worth thousands of dollars. Tennyson took a plain sheet of paper and made it worth a fortune by writing a poem on it. Your individual success depends not only on the kind of time you have to sell, but on what you do with the kind you have. The common laborer who pitches in and actually earns his four or five dollars a day is head and shoulders above the high salaried executive who postpones from time to time the execution of the very plans on which his high salary is based.

Learn to do it now. The road to ruin is paved with the good intentions of procrastinators.

**16. Concentration.**—You must also learn concentration. It is one of the most important elements of success. It is also one of the least understood. To most people concentration means an absorbing interest in some one thing to the exclusion of all others. This, however, is not the kind of concentration that a business man would use even though he had the ability. There are too many interruptions and counter interests demanding his attention from time to time. The real meaning of concentration in business is first, the ability to formulate a plan or policy, second to make suitable preparation for carrying out that plan or policy,

and third, to see that it is actually carried out. The nature of the work does not matter. Interruptions are sure to occur. Intelligent concentration recognizes and deals with them as they come up, without for one moment losing sight of the real problem in hand.

**17. Fight.**—All the world loves a man who with his back to the wall, and against heavy odds stands up four square and fights for his rights. The story is told of a world famous pugilist, that he was defeated in his first fight by a man scarcely half his own size. The derisive comments which followed him wherever he went so maddened him that he straightway went into training, followed the little fellow all over the country, fought all kinds of battles in all kinds of places, and finally in his supreme moment as a contender for the championship had the satisfaction of knocking the world's title holder out of the ring. In our every day business life success is won through the application of similar principles. There is always a fighting chance to come back.

### C. The Meaning of Service

More and more material wealth is being mistaken for success. Greatness does not consist in the ability to pile up an immense fortune, or the power to sway vast empires. Greatness is to be found where a man is truly happy, and no man is truly happy unless he makes others happy with his happiness.

**18. Making a Name.**—We have taught our American boys that they were cut out for Congressmen rather than carpenters, for bankers instead of blacksmiths, for a career, not a calling. Not more than one in a thousand ever preaches a great sermon, carves a great statue, or writes a poem that lives for centuries as a classic. Are the other nine hundred and ninety-nine to be failures? Better learn to make a broom handle, a horseshoe, or a loaf of bread. The world needs these vastly more than it does names. Find your place wherever it may be, and then seek to serve your fellow men as faithfully and as fully as you can. There is no other secret of success.

**19. Fame and Wealth** are magic words but look back thru history and down the list of noted men and women you have known and unless there was something substantial back of their dreams and ideals, unless their efforts were planned

for the benefit of others, what they really found at the end of the rainbow was only a pot of gold, an empty nothing. What concerns us most is the future with its unlimited opportunities for development thru honest effort and faithful service. Elbert Hubbard once said: "To have worked is to have succeeded. We leave the results to time."

**20. The Spirit of Service.**—Pick out any business house in the country and you will find that the measure of service rendered goes hand in hand with the measure of success attained. Examples are almost too numerous to mention. A salesman gives up a week end pleasure trip to help his customer install some new equipment. A merchant makes a special trip to the city to purchase a little low priced article just to help out a customer. A seed house refuses to sell plants to a would-be purchaser after the growing season has advanced too far. A publisher refuses to print clever vulgarity in his magazine, even though he knows that by so doing he could greatly increase his circulation. A tailor makes his clothes so strong that he rarely sees his customers oftener than one or twice a year. A bank cashier refuses to loan money to a wealthy and worthy client when he knows that the money is to be used in a highly speculative venture. It is true that some men may appear to succeed through the practice of different methods, but for lasting success, show me the business man whose first thought is not "How much will the traffic bear," but rather, "How much can we give our customers for the money."

**21. The Key to Success.**—Thus there is no magic key or secret of success. Every man starting out on the journey can see if he will the sign posts that point out the direction. Every man has within himself all these qualities which will ether make him or break him. And finally every man knows deep down in his heart that the principles of Jesus Christ, the brotherhood of man, or the golden rule of service, whichever you choose to call it, is the only true principle of success. Therefore, if you want to succeed wake up, go to work in earnest, and make the golden rule your one and only rule of action.

## BOOKKEEPING

**1. Definition.**—Bookkeeping is the art of recording pecuniary or business transactions in a regular and systematic manner. In a sense it is a branch of mathematics based on certain accepted rules and principles with which every one in this modern age should be familiar.

**2. Its Object.**—The primary object of bookkeeping is to preserve a record of such exchanges and transactions as would otherwise be forgotten if trusted to memory. A set of books properly kept in time produces a business history that will prove of inestimable value to its owner in years to come.

**3. Ignorance and Neglect Dangerous.**—It is surprising how many people buy and sell, settle accounts and transact various kinds of business without keeping any books themselves. They always depend upon somebody else's bookkeeping.

**4. Keeping Books Necessary to Success.**—Show me a really successful business man and I will show you a man who keeps a careful and correct record of his transactions. Keep your own accounts; do your own figuring and never accept the figures of others without comparing them with your own. It is the only safe road to success.

**5. Compelling Forces of the Retail Merchant.**—There are at least two main forces that compel the successful retail merchant to keep books. First, competition; second, credit.

**6. Competition.**—In order to meet competition intelligently and without loss he must know exactly what the goods cost him, what his selling and overhead expenses are and what percentage to add to make the sale profitable. Goods not priced high enough to cover these items are actually sold at a loss.

**7. How to Arrive at the Proper Selling Price.**—The most convenient way of arriving at the proper percentage to add to the first cost of goods for overhead is to use the average ratio of operating expenses to net sales covering a past period. For instance, if a merchant's annual sales for the last fiscal year were $25,000 and the expense of conducting his business was $5,000, his overhead was 20 per cent. By adding the desired percentage of profit on sales to the overhead percentage, and deducting from 100, gives the percentage of invoice cost to selling price. The invoice cost of an article divided by this percentage gives the selling price. Illustrating the above: $5000 \div 25000 = .20$ percentage of overhead. Figuring 10 per cent profit. $100 - (20 + 10) = 70$ percentage of cost to selling price. An invoice cost of articles at $2.80 \div .70 = $4.00 selling price.

**8. Rapidity of Turnover.**—The oftener goods are turned over the lower will be the required percentage for overhead expense and profit on each sale; besides quick turnovers warrant the buying of goods in larger quantities, thereby securing better prices. To ascertain the turnover divide the cost of goods sold during the year by the cost of the average stock carried.

**9. Credit.**—The second compelling force that requires the merchant to keep books is the obtaining and extending of credit. In order to obtain credit he is asked to furnish a correct statement of his financial condition either by his creditors, his bankers, or the commercial agencies. Likewise in extending credit the books of the business man should show who is entitled to credit, to what extent, what security, if any, how promptly obligations are met, the total of outstanding accounts and their realizable value.

**10. Depreciation.**—Furthermore, provisions should be made for depreciation on stock, buildings, fixtures, etc., age, obsolescence and wear and tear impair their value so that a certain percent of the original cost must be charged off annually as a loss in order to show the proper present worth.

**11. Bookkeeping for the Farmer and Others.**—What is true of the retail merchant is equally true of every other business man, farmer, mechanic and laborer. All need to keep books in order to know where they stand financially, what their resources and liabilities are, (3) whether they are making or losing money. Then if at any time they find it necessary to apply for a loan at the bank it will not be difficult for them to show by their books and a correctly prepared financial statement that they are entitled to it.

### A. How to Learn Bookkeeping

**12. Go to School.**—There is no better way to learn bookkeeping than under the instruction of a competent teacher. High Schools, Business or Commercial Schools, Colleges and Universities include in their courses the study of bookkeeping and accounting. Night schools furnish instruction for those who are employed during the day. All who have an opportunity to attend school should take advantage of it.

**13. Home Study.**—Where school instruction is not available some elementary work on bookkeeping should be secured and the evenings devoted to study. There is nothing very difficult or complicated about the subject. Sometimes a correspondence course is found helpful and satisfactory.

**14. Two Systems.**—There are two systems of bookkeeping: Single Entry and Double Entry.

**15. Single Entry.**—Single Entry is so called because only one entry is required for each transaction and only personal accounts or accounts with individuals are opened and kept in the Ledger. When we sell a person goods and he does not pay for them we debit or charge his account for the amount and when he pays the bill we credit his account. Likewise, when we buy merchandise and do not pay cash we credit the account of the seller for its value and when we pay him we debit his account.

**16. Books Necessary.**—The main books generally used are the Day Book, Cash Book and Ledger. Additional books of record such as Sales Books, Invoice Books, Bill Books and others are sometimes kept, depending upon the nature and extent of the information desired.

**17. How Gains and Losses Are Determined.**—Since no accounts showing gains or losses are kept in Single Entry, an itemized statement of same cannot be obtained. However, the Net Gain or Net Loss of the business can be determined in the following manner: Ascertain the Present

Worth by finding the difference between the Resources and Liabilities and compare it with the Investment. If the Present Worth is greater than the Investment the difference shows a net gain, if less, a net loss.

18. **Objection to Single Entry.**—The chief objection is that there is no proof whatever against errors and omissions. If goods are sold on credit and posting is omitted to the person's account, the error may never be discovered. Or worse still, if the amount were posted to the credit instead of the debit side, the loss might be double; or if dollars were posted as so many cents the loss would be that many dollars less as many cents; or, if a creditor is paid and his account not charged, it might be forgotten and the same account paid twice. Such errors in single entry might never be discovered, whereas in Double Entry they would throw the books out of balance and cause an immediate search for the error.

19. **Double Entry.**—Double Entry is so called because there are two or more entries for every transaction. Every time an account is debited for a certain amount, some other account or accounts are credited for a like amount. Furthermore, accounts are kept not only with persons, but with commodities as well.

20. **Books Used.**—There are two kinds of books used in the Double Entry System: Principal and Auxiliary or Aid Books. Principal Books are books of original entry from which posting is made to the Ledger, such as the Day Book or Journal, Cash Book, Sales Book and the Ledger itself. Auxiliary Books are used to classify business transactions. Among those used are the Blotter, Bill Book, Order Book, Invoice Book and a great many others.

21. **Day Book and Journal.**—Formerly these two books were kept separately and entries made in the Day Book were arranged by debits and credits in the Journal before posting to the Ledger. Now the two books are consolidated into one, preferably called a "Journal," and the entries arranged for posting by debits and credits followed by a short explanation of the transaction. The ordinary two column Journal may be used, with the left hand column for the debit and the right hand column for the credit, but in order to save time and work in posting special Journals of four, six, eight and more columns are often prepared. The opening entry should contain an inventory of the Assets and Liabilities.

**22. Cash Book.**—This book is used for recording all cash transactions. The left hand or debit side is for recording receipts, and the right hand or credit side is for recording payments. The difference in the sums total of the two sides showing at any time the exact amount of cash on hand. The credit side of the cash book can never be the greater, because we cannot pay out more cash than we have received. The balance of cash on hand at the end of the month may be posted to an account in the Ledger.

**23. Sales Book.**—This is a book in which all the merchandise Sales are recorded. The personal accounts charged therein should be posted daily and the total sales may be carried forward until the end of the month and then posted in one entry to the credit of a Sales Account in the Ledger. Where Sales and Credit Tickets are used instead of a Sales Book, they may be sorted at the close of the day, charging the total cash receipts to cash, the credit sales to the accounts of their respective customers, and credit the total Sales to Sales Account. When goods are returned, Sales Account must be charged with them and the customer's account credited.

**24. Ledger.**—The Ledger is the book of final results, collecting and classifying from the books of original entry, all debits and credits having the same name under the one heading called an account by a process termed posting.

**25. Ledger Divisions.**—In a large business three Ledgers or Divisions of Ledgers are used, viz.: General Ledger, Purchase Ledger and Sales Ledger, the latter two carrying controlling accounts on the General Ledger. In a small business only one Ledger is used which may, however, be divided into three sections: (1) General Accounts, (2) Accounts Receivable, (3) Accounts Payable. With the present loose-leaf ledger method this division can be easily made and by arranging the accounts under each division in alphabetical order a separate index is not necessary.

**26. The Fundamental Rule of Double Entry Bookkeeping. Debit what you receive; Credit what you give.** This is bookkeeping in a nutshell. We debit what we receive because it costs us something; we credit what we give because it produces us something of value. Whenever we debit an item, it is always either to increase our resources or our losses, or to decrease the personal accounts or notes we owe known as liabilities. Whenever we credit an item, it is always

either to increase our liabilities or our gains, or to decrease the personal accounts or notes owing us, known as resources. If this rule is fully understood, kept in mind and strictly adhered to, mistakes in bookkeeping will seldom be made.

**27. Another Rule.**—For every amount entered on the debit side of an account or accounts, enter also a like amount to the credit side of some other account or accounts.

**28. The First Thing to Learn.**—The law of debit and credit is the first thing to learn. Debit and credit are terms used to express the relation between persons or commodities that enter into any business transaction. The simplest meaning of debit is to charge and of credit to trust. Charges or debits are always entered to the left and credits to the right in the columns or sides of the books of entry.

**29. Resources or Assets.**—A resource or asset is anything of value belonging to us such as cash, merchandise, buildings, real estate, store fixtures and furniture, notes receivable or any personal account owing to us.

**30. Liabilities.**—A liability is an obligation that we owe such as notes payable or any personal account.

### B. Legal Points in Bookkeeping

**31. Entries as Evidence.**—Only records of original entry are accepted as evidence in court. The Day Book, Journal as evidence of sale and delivery of goods or work done.

**32. When to Make Entry.**—The time to make an entry or charge against the purchaser of goods or for work done is when the goods are ready for delivery or the work has been completed.

**33. Erasures.**—Entries to be admissible as evidence, should be made by the proper person, and without erasure, alterations or interlineations.

**34. Correcting Mistakes.**—Mistakes should be corrected by marking the wrong entry void, and then making a correct entry, or if there is sufficient room, make a brief explanation.

**35. Itemized Accounts.**—All accounts must be itemized and

no general charge can be considered as evidence without giving the items.

**36. Guaranteed Accounts.**—If A. guarantees that he will see that B. will pay a certain bill of goods, then the goods must be charged to A. and not to B. in order to hold A. responsible; but if A. guarantees the account of B., if the account is for some date of the past, then such a guarantee must be in writing.

**37. Sworn Statements.**—To collect a debt on the evidence of book accounts from a person in a distant place, a copy of the account should be made out and accompanied by an affidavit, setting forth that the above account is correctly taken from the book or records of original entries, and that the charges were made at or about the same time of their respective dates. That the goods were sold and delivered at or about the time the charges were made. That the charges are correct and the accounts just, and that the person named is not entitled to any credit or set-offs not mentioned in the account. This affidavit should be sworn to before a magistrate, commissioner or notary public and it will save the trouble of producing or sending the books.

### C. Rules for Journalizing and Posting

**38. Personal Accounts.**—Persons are debited when they get into our debit and when we get out of their debit. Persons are credited when we get into their debt, and when they get out of our debt.

**39. Property.**—Property is debited under such titles as Merchandise, Real Estate, Cash, etc., when it comes into our possession. It is credited when it goes out of our possession.

**40. Allowances.**—Discount, Interest, Commission, etc., are allowances debited when made by us, and credited when made to us.

**41. Losses and Gains.**—An account shows a loss, if the thing it represents has cost more than it has produced; a gain if it has produced more than it cost.

**42. Resources and Liabilities.**—An account shows a resource, if it represents property on hand or a debt owing to us; a liability if it represents a debt owing by us. The excess in an account showing either a resource or a loss will always be on the debit side and the excess showing either a liability or a gain on the credit side.

**43. The Proprietor's Capital Account.**—This account represents the proprietor's net capital. The title "**Stock**" is sometimes used instead of the proprietor's name. The account is debited for his liabilities assumed by the business, for all amounts drawn by him from the business for his private use, and for his net loss if any. It is credited for the amount of his investment on commencing business, for all later investments, and for his net gain if any. The balance of the account is his net capital at time of closing.

**44. Partnerships.**—In a partnership each partner's net capital would appear in the respective account bearing the partner's name and the net profit (or loss) carried to the credit (or debit) of these accounts in proportion agreed upon.

**45. Corporations.**—In the event of a Corporation this account is known as the "Capital Stock" account and represents the amount of capital stock issued. The profit or loss is carried to a separate account called "Surplus.'

**46. Proprietor's and Partner's Private Accounts.**—With a single Proprietor or Partnership arrangement, it is advisable to open a private account under the proprietor's or partner's names to which all sums drawn by them from the business for private purposes are charged. At the close of the year the totals of these accounts are charged into the Proprietor's or Partner's Investment accounts.

**47. Cash.**—This is a title used to designate money. Under it we include Currency, Bank Drafts, Checks, Sight Drafts, Express and Postal Money Orders and usually all kinds of paper payable on demand. Cash is debited when received and credited when paid out. The difference shows the cash on hand which is a Resource. The debit side of Cash must always be equal to or exceed the credit side **"because we cannot pay out more cash than we have received."**

**48. Merchandise.**—This is a general term for all goods and wares dealt in or carried in stock by an active business concern. A Merchandise account may be opened and debited with all goods bought and credited with all the proceeds from goods sold. The value of goods on hand unsold added to the proceeds from sales, less the cost, shows the profit on the goods sold. However, if the cost exceeds the other two items, the goods were sold at a loss. The Inventory of goods on hand is always a **Resource.** Sometimes for the purpose of showing profits and losses more in detail, separate accounts are opened with such commodities as "Flour,"

"Potatoes," "Apples," "Corn," etc., instead of including all under one general title as "Merchandise."

**49. Purchases Account.**—Modern practice is introducing the **Purchases Account** in place of the debit to Merchandise. All merchandise purchased is debited or charged to Purchase Account. If Freight, Drayage, Expressage, etc., on same are kept separately, their totals should finally be charged into this account also. Credit the account with any merchandise returned to the seller or any discounts or allowances for defects, etc. The balance of the account is transferred to the debit of a "Trading Account."

**50. Sales Account.**—This account is the credit of merchandise. Credit it with the total sales of all merchandise as shown by the Sales Book, Sales Tickets or whatever method is used for recording same. Returned merchandise by customers, whether for cash or credit, should be charged or debted at selling price to this acocunt. The difference in the account will be the net sales which is transferred to the credit of "Trading Account."

**51. Bills or Notes Receivable.**—These are other person's notes or written obligations which we hold for which we expect to receive a specific sum when due. Charge this account with all notes, time drafts, and trade acceptances held against others, and credit it when paid or otherwise disposed of. The balance will show the unpaid items which is a **Resource.**

**52. Bills or Notes Payable.**—These are our notes or written obligations which others hold, for which we are to pay a certain amount when due. Credit this account with all notes given to trade creditors, or trade acceptances and time drafts accepted in their favor, and charge the account as the same are paid. Balance of account shows obligations outstanding, which is a **Liability.**

**53. Accounts Receivable.**—These are accounts of persons or individuals owing us. Debit the General Ledger account under that heading with the total of all charges against these accounts during the month and credit it with all payments and allowances made on said accounts. The balance must agree with the sum of the balance of the individual accounts and represent a **Resource.**

**54. Accounts Payable.**—These are accounts that we owe others. Credit the General Ledger account under that title with the total of all such accounts and debit or charge it with all that has been paid on them during the month. The

balance must agree with the sum of the individual balances of the accounts that we owe.

55. **Expenses.**—Under this title are generally included such items as Rent, Salaries, Office Supplies, Fuel, Light, Postage, etc. If it is desired to show these items in detail, separate accounts may be opened for each one in the Ledger. Expense Accounts finally close into **Profit** and **Loss Account.**

56. **Store, Office and Delivery Equipment.**—These are not **Expense Accounts,** but represent an investment. Charge **Store Equipment** with such items as Counters, Shelving, Scales, Measures, etc.; **Office Equipment** with such office furniture as Desks, Safes, Letter Files, etc.; **Delivery Equipment** with Trucks, Wagons, Horses, Harness, etc. Repairs for these should not be charged to any of these accounts; they are an **Expense.** A reasonable amount should be always charged off annually on **Equipments** for **Depreciation.**

57. **Depreciation.**—Property such as Buildings, Machinery, Tools, Store and Office Fixtures, depreciate from year to year by reason of wear and tear and obsolescence. In the course of time it becomes entirely worthless and must be replaced. Provisions are made for such replacement by setting up a certain percent of the original cost as a **Reserve** and charging off that much each year for depreciation to a **Depreciation Account. Accounts** and **Bills receivable** are also subject to shrinkage in value when some of them are found worthless and uncollectable, and a **Reserve** must be provided for **Bad Debts.** The percentage or amount to be charged off each year depends upon the estimated life or length of usefulness in the case of property, and the proportion of loss on notes and accounts that may be sustained.

58. **Reserves.**—Part of the profits of a concern may be retained in the business to provide funds for certain future needs as for the payment of fixed debts or business extensions, depreciation, bad debts, income, taxes, etc. The sums set aside for such purposes are taken out of and charged to Surplus Account, and credited to the **Reserve** set up for that special purpose.

59. **Deferred Charges.**—Insurance and other similar expense items paid ahead or beyond the date of closing the books are entitled to a credit for that portion of the premium on the unexpired time. This credit is entered on the credit side of Insurance accounts and the difference charged to Loss. After closing account this "Deferred Asset" will be brought forward to the debit side of Insurance as a **Resource** and

appears as such in the Financial Statement. Office Supplies, Packing Material on hand also come under this head.

**60. Accrued Interest Receivable.**—Where interest has accrued but not yet paid on notes and other commercial paper, due from others, charge this account with the amount and credit Interest account. When the interest is received it is credited to **"Accrued Interest Receivable."**

**61. Accrued Expenses.**—Accrued expenses such as Interest Payable, Salaries or Wages Payable, earned, but not yet paid, accrued Taxes Payable, etc., should be charged to these respective accounts at the end of the accounting period and credited when paid.

**62. Trading Account.**—This account shows the inventory of merchandise at the opening of business, is charged with **Purchases** and **Sales Allowances** and credited with **Sales.** The Inventory at closing is then credited and the balance will show the gross profit on trading. This gross profit is then transferred to the credit of **Profit** and **Loss Account,** and the inventory brought down for a new balance.

**63. Profit and Loss.**—Charge this account with the balances of all expense accounts, and credit it with the gross profit from trading. The difference will be the net profit or loss, which is closed into the proprietor's account or to the **Surplus Account.**

**64. Trial Balance.**—The Trial Balance is taken to ascertain the equality of the debits and credits as posted into the Ledger. It is nothing more nor less than a copy of the accounts or their balances, and if the footings of the debits and credits do not agree there is an error in posting. In that case it becomes a "trial" in more than one sense. (See "How to locate errors in a trial balance.") The Trial Balance is not an **absolute proof,** of the correctness of the work, but if the footings are equal the work is generally regarded as correct.

**65. Monthly Summary of Business.**—A monthly summary of purchases, sales, expenses and Ratios will be found useful for comparison. It may be arranged with columns for these various headings with the figures taken from the Ledger. Each month the figures for that month should be recorded so that the record will give the total for each month from the first of the year to date. The sum of these monthly totals will be the record of totals for the year.

**66. Profit and Loss Statement.**—The amounts for making up this statement are best obtained from the Ledger. It is

made up periodically; usually annually or semi-annually when an inventory is taken. An actual inventory should be taken at least once a year. The basis should be "cost," or "cost or market price; whichever is lower," with conservative deduction for obsolete and shelfworn goods if figured at cost. When monthly profit and loss statements are desired and **where the percentage of overhead and profit is known,** the approximate cost of the goods sold can be arrived at as follows: Deduct the percentage of overhead and profit from 100 and multiply by the amount of the net sales; the result will be the cost of the goods sold, which when deducted from the net sales will give the approximate gross profit on sales.

**67. Balance Sheet.**—This is a statement showing the financial condition of a business at a particular time. There are two forms of balance sheets in general use. One sometimes called a **Financial Statement.** This is the non-technical and more intelligible to the ordinary man; the other is the more technical form used mostly in statements drawn for publication. Both arrange the Assets or Resources in one group; and the Liabilities in another. The difference between the totals of the two groups gives the Present or Net worth of the business. The title of the statement should be in full and include the name of the business enterprise and the date.

### D. Locating Errors in a Trial Balance

When Trial Balance totals do not agree it is certain that one or more errors have been made somewhere, but there is no single rule or combination of rules with which such errors can at once be located outside of a careful review of the entire work. However, the following hints and suggestions may be of service and help in locating them.

**68. Errors of Omission.**—A large difference between the Debit and the Credit totals of a Trial Balance usually indicates an omission of some item or account. See if all the accounts or balances of accounts have been included in the Trial Balance. If an amount has been omitted in posting the Trial Balance also will be out of balance that much. Look for such an unchecked amount in the books from which postings were made.

**69. Errors in Posting.**—An amount posted to the wrong side of the Ledger will throw the Trial Balance just twice that amount out of balance. If the difference is divisible by 2, look for half of that amount on the side with the smaller totals in the books from which postings were made and see

if such an amount was posted to the other side of the Ledger account. The Cash and Bills Receivable balance can never be on the credit side, nor the Bills Payable balance on the debit side of the account.

**70. Errors in Addition.**—If the difference be 1, or in round numbers as 10, 100, or 1,000, the error very likely results from wrong addition or subtraction. Check the additions of the Trial Balance and if the error is not found there, check those of the Ledger also. Where Ledger Balances only are entered in the Trial Balance an error may have been made in finding the difference between the two sides of an account. If an error is in the cents column only, the columns to the left need not be re-added.

**71. Transposition of Figures.**—If the difference is divisible by 9 the error may rest in a transposition of figures, as for instance 57 posted as 75 causing a difference of 18, or 735 posted as 537 causing a difference of 198, both of which are divisible by 9. Errors of transposition are difficult to find; however, if the difference consists of less than three figures such as 9, 18, 27, etc., a one-column transposition may have caused the error. Divide this difference by 9; if the quotient is 1, the difference between the two transposed figures is also 1; if 2 or 3 the difference between the transposed figures is likewise 2 or 3. When the difference lies between 99 and 1,000, the error may be due to a two-column transposition. Here the middle figure of the error is always a 9, as for instance 981 written as 189 results in an error of 792. Dividing the two outside figures of the difference (72) by 9, the quotient 8 is also the difference between the two transposed figures (9 and 1).

**72. Slides or Transplacements.**—Figures are transplaced when some or all of the digits of a number are moved one or more places to the right or left without any change in their order; for instance 32.7 written as 32.70 or 3.27 or as 300.27. The first is a one-column, the others are two-column slides. The error caused by a one-column slide is always divisible by nine, a two-column by 99, a three-column by 999, etc. Such division disregarding decimals, always gives the figures whose transplacement has caused the error. The error caused by writing 327 as 32.70 is 294.30 which divided by 9 produces 327; or 327 written as 3.27 causes a difference of 323.73 which divided by 99 produces 327; or 327 written as 300.27 results in an error of 26.73 which divided by 99 gives 27 the part transplaced.

## SHORTHAND AND TYPEWRITING

A few years ago this chapter would have been devoted to a study of penmanship, ornamental and otherwise. Today the typewriter is in universal use. In our schools and colleges an effort is made to produce neat, legible writers, but far more stress is laid on the subject of shorthand and typewriting.

**1. Modern Inventions.**—The modern efficiency expert often wonders how the old fashioned business man ever accomplished any results. Where letters were laboriously transcribed by hand and copied in antiquated letter presses, the whole operation is now done by the dictating machine and the typewriter in one-tenth of the time. Where book-keepers perched on high stools made detailed entries in huge bound volumes and spent hours in footing up long columns of figures, auditing and book-keeping machines now make the necessary entries, add, subtract, multiply, or divide the figures and take the place of ten men. Where rows of girls were formerly employed to address envelopes, a far neater looking address is assured through the use of any one of a dozen types of labor saving addressing machines. Of what use, then, is a beautiful handwriting in this machine age?

**2. Shorthand.**—Again it is beyond the scope of this work to attempt any course of instruction on the subject of shorthand. Such a course belongs to the schools and colleges and

# The Alphabet of Gregg Shorthand

## Consonants

Written forward:

K G R L N M T D TH

Written downward:

P B F V CH J S SH

H NG NK

(A dot)

## Vowels

### A-group

| | | | |
|---|---|---|---|
| *Short* | *ă* as in *cat* | O | |
| *Medium* | *à* " " *calm* | O | |
| *Long* | *ā* " " *came* | O | |

### O-group

| | | | |
|---|---|---|---|
| *Short* | *ŏ* as in *hot* | ↄ | |
| *Medium* | *aw* " " *audit* | ↄ | |
| *Long* | *ō* " " *ode* | ↄ | |

### E-group

| | | | |
|---|---|---|---|
| *Short* | *ĭ* as in *din* | o | |
| *Medium* | *ė* " " *den* | o | |
| *Long* | *ē* " " *dean* | o | |

### OO-group

| | | | |
|---|---|---|---|
| *Short* | *ŭ* as in *tuck* | ɔ | |
| *Medium* | *o͝o* " " *took* | ɔ | |
| *Long* | *o͞o* " " *doom* | ɔ | |

## Diphthongs

| Composed of | | | | Composed of | | | |
|---|---|---|---|---|---|---|---|
| *ū* | *ē-o͞o* | as in *unit* | ↄ | *oi* | *aw-ē* | as in *oil* | ↄ |
| *ow* | *ă-o͞o* | " " *owl* | ↄ | *ī* | *ä-ē* | " " *isle* | ↄ |

would require far more space than we can devote. For the benefit of those denied the privilege of such instruction, however, we print the accompanying cut showing the shorthand alphabet. It is included through the courtesy of the Gregg Publishing Company.

3. **Typewriting.**—On the other hand it is possible to attain a fair degree of efficiency on the typewriter by the "sight" system without losing the time or going to the expense of mastering the elaborate "touch" system. In fact, any intelligent person in a few weeks can acquire such skill as would require many months by the "touch" system. With a typewriter in every office and one in nearly every home, there is a real need for the simple exercises included in the following paragraphs.

4. **The Choice of a Machine.**—Select a machine with a standard keyboard such as the Royal, Remington, Woodstock, Underwood, L. C. Smith or Monarch. These machines may be rented by the month from any typewriter agency, with the privilege of applying the rent paid on the purchase price. Thus you may pay as you learn.

5. **"Sight Typewriting"** is the system universally used by so-called one finger artists. In our system, however, we recommend right from the beginning the use of two fingers, the first and second on each hand. Later on as your skill increases you may bring into use the third and fourth digits.

6. **The Standard Keyboard.**—The keyboard of all standard typewriters are identical and when you have mastered one you have mastered all. In the above illustration all the keys to the right of the imaginary line A.B. are struck with either the first or second fingers of the right hand; all the keys to the left of the line with the first and second finger of the left hand. The spacer bar should always be operated with the thumb, the shift keys, back spacer or tabulating keys by the little fingers, thus leaving the first two fingers free for the actual typing.

7. **Exercise 1.**—Fill one whole page with the word "them."

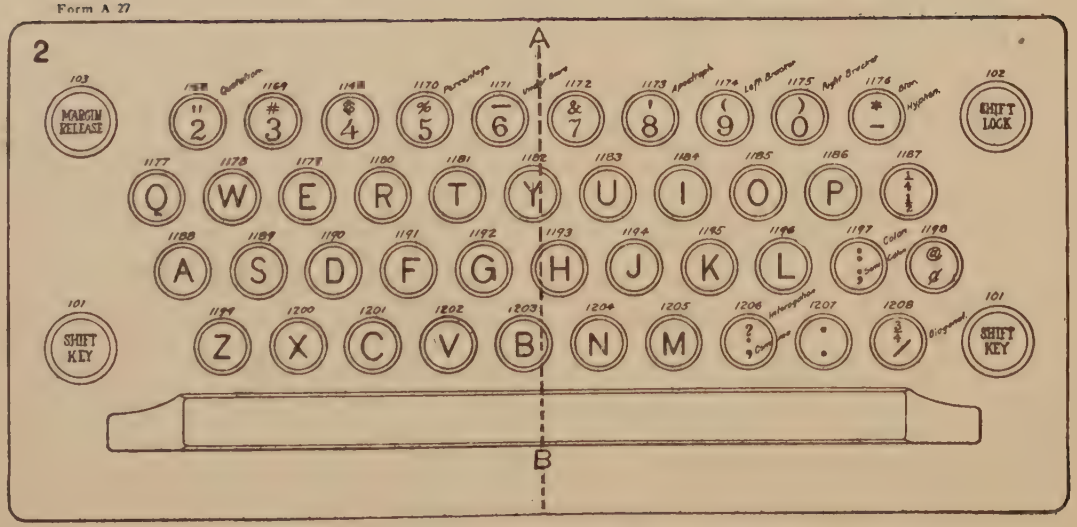
"t" is struck with the first finger of the left hand.

"h" is struck with the first finger of the right hand.

"e" is struck with the second finger of the left hand.

"m" is struck with the second finger of the right hand.

This exercise is put here for two reasons. In the first place the first three letters, "the" are used more than any




A STANDARD TYPEWRITER KEYBOARD

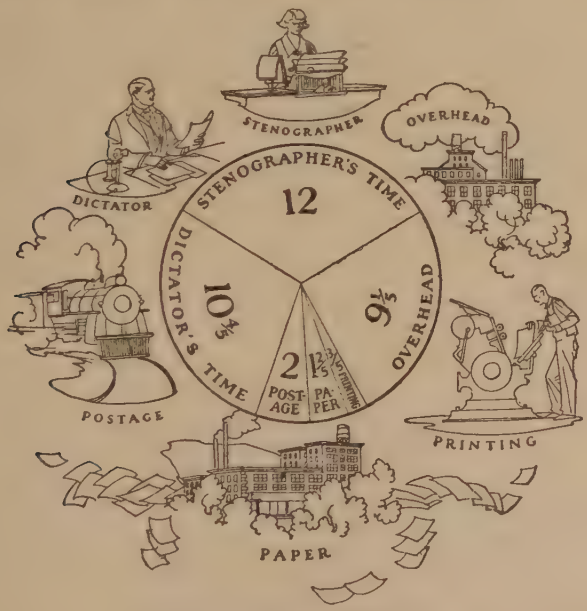
other word in the English language. Secondly, it will introduce that important principle of typewriting, the alternate hand movement.

8. Exercise 2.—Copy each of the following words 300 times:

then, these, theme, there, those, think.

This exercise introduces the principle of using one finger to strike two or three times in succession (se and ese).

9. Exercise 3.—Copy "they" three hundred times, and "that" three hundred times. Then fill up an entire page with the words, "they think that," and another whole page with the words "they think that those think." Be sure to strike the spacer bar with the thumb between each word.




THE COST OF A LETTER

10. Exercise 4.—Write the first three letters of the alphabet "a b c" one hundred times. Then add the next letter "a b c d" and write the combination 100 times. Keep adding one letter in this manner until you have written the entire

alphabet one hundred times. This exercise will definitely locate in your mind every letter on the keyboard.

**11. Exercise 5.**—The following sentence contains all the letters of the alphabet:

"The big brown fox jumped quickly over the lazy dog."

Write the first word 100 times, the first two words 100 times, the first three words 100 times and so on until you have written the whole sentence 100 times.

**12. Exercise 6.**—Here is another sentence that contains every letter of the alphabet:

"Wafting zephyrs quickly vexed Jumbo.

Copy this sentence the same as in exercise 5.

**13. Capitals, Figures, Punctuation Marks, and Symbols.**—Capital letters are made by pushing down the shift key with the little finger and then striking the letter required with one of the other fingers. The standard keyboard provides a special row of keys for all the figures except 1, which is formed by the small "l" or by the capital "I". Punctuation marks and symbols, with the exception of commas and periods, are also made on most machines by depressing the shift key. Care must be used to release the shift key before striking the next letter.

**14. Exercise 7.**—Copy each of the following exercises two hundred times:

Harold James Theodore Walter
Loren William Meyers
1 2 3 4 5 6 7 8 9 0
26 341 8674 95216
2000 Bu. wheat @ $1.57⅞

**15. Speed.**—Now that you have mastered the keyboard it is time to try for speed. Although almost any will serve the purpose, the following practice sentence is suggested:
"Now is the time for all men to come to the aid of the party."
Copy this sentence at least 100 times every day until you are able to run off sixty words a minute with ease and accuracy. It is also good practice to write your personal letters on the typewriter, to copy interesting items from newspapers and magazines, always holding in your memory as many words as possible while copying them. You will be astonished to learn what rapid progress you can make in this way.

**16. Sample Business Letters.**—In the chapter on letter writing (page 363) will be found any number of sample business letters. Pick out one paragraph or one short letter every day and copy it twenty-five or thirty times, or at least until you can show three perfect copies. This will not only be good technical practice but it will make you familiar with the best forms of business English. In that same chapter you will learn how to dress up a business letter or a sales letter so that it looks its best. The form of a letter is almost as important as the message.

**17. Carbon Copies.**—Duplicate copies may be had through the use of carbon sheets. To get the best results first lay the original sheet face downward on the desk; next lay the carbon paper on it face up, and on top of that the plain sheet of paper that is to receive the carbon copy; finally pick up the three sheets gently and insert into the typewriter in the usual way.

**18. To Open and Close Formal Letters.**—Although the beginning and ending of ordinary business letters need no particular discussion, it is well to remember that in addressing a corporation, the salutation should be "Dears Sirs" instead of "Gentlemen." Again, every once in a while there is a need to address some public official. If there is a doubt in your mind as to the correct form just consult the following examples:

Hon. William B. McKinley
United States Senate
Washington, D. C.
Mr dear Senator: (or, more intimate, "Dear Mr. McKinley:")

. . . . . .

Yours very truly,

Hon. Richard Yates
United States House of Representatives
Washington, D. C.
Dear Sir: (or, more intimate, "Dear Mr. Yates:")

. . . . . .

Yours very truly,

The Secretary of State
Springfield, Illinois
Dear Mr. Secretary

. . . . . .

Yours very truly,

Hon. Len Small
Executive Mansion
Springfield, Illinois
Dear Sir: (or, more intimate, "Dear Governor Small:")

..... ..... ..... ..... ..... ..... ..... .....

Yours very truly,

Hon. Adolph Marks
State Capitol
Springfield, Illinois
My dear Senator: (or "Dear Sir:" or "Dear Mr. Marks:")

..... ..... ..... ..... ..... ..... ..... .....

Yours very truly,

Hon. William E. Dever
Mayor's Office
Chicago, Illinois
Dear Sir: (or, more intimate, "Dear Mr. Mayor:" or, still more intimate, "Dear Mr. Dever:")

..... ..... ..... ..... ..... ..... ..... .....

Yours very truly,

Hon. Victor P. Arnold
Circuit Court Building
Chicago, Illinois
Dear Sir: (or more intimate, "Dear Judge Arnold:")

..... ..... ..... ..... ..... ..... ..... .....

Yours very truly,

Mr. John A. Cervenka, City Treasurer
City Hall
Chicago, Illinois
Dear Sir:

..... ..... ..... ..... ..... ..... ..... .....

Yours very truly,

Superintendent J. F. McAndrew
Chicago Public Schools
Chicago, Illinois
Sir: (or "Dear Sir:" or "My Dear Sir:" or very informally, "Dear Mr. McAndrew:")

..... ..... ..... ..... ..... ..... ..... .....

Yours very truly (or
"Yours sincerely,")

Professor James K. Jones (add abbreviations for degrees, such as "Ph.D.," "LL.D.")
The University of Chicago
Chicago, Illinois
Sir: (or "Dear Sir:" or, informally, "Dear Professor Jones:")

Yours very truly (or
"Yours sincerely,")

The Rt. Rev. Thomas J. Walsh, D.D.,
Bishop of Trenton
Trenton, New Jersey
Right Reverend and dear Bishop: or for lay Catholics, "Right Reverend Bishop:" or, simply, and especially for lay Protestants, "Sir:"

Yours sincerely,

(The) Rev. Henry C. Miles
1645 Fifty-third Street
Chicago, Illinois
Sir: (or "Dear Sir:" or "My Dear Sir:" or, very informally, "Dear Mr. Miles:")

Yours very truly (or
"Yours sincerely,")

His Holiness, Pope Pius XI
The Vatican
Rome
Your Holiness:

Cordially (or Sincerely) yours, or Obediently yours, or Sincerely yours in Christ,

His Eminence, William Cardinal O'Connell
Archbishop of Chicago
740 Cass Street
Chicago, Illinois
Your Eminence:

Sincerely yours; if the writer is a "religious" Catholic the words, "in Christ," are usually added.

THE RIGHT LETTER IS A PRIVATE INTERVIEW

## BETTER BUSINESS LETTERS

### or

### How to Avoid Mistakes In Letters

**1. The World as a Market.**—The world is your market if you can write red blooded business letters. You can satisfy old customers, win new ones, adjust complaints, introduce new lines, sell more goods, and collect accounts. You can reach your trade in a single day, cover vast distances, and talk intimately with the millionaire or the laborer. Opportunity and success are in your grasp.

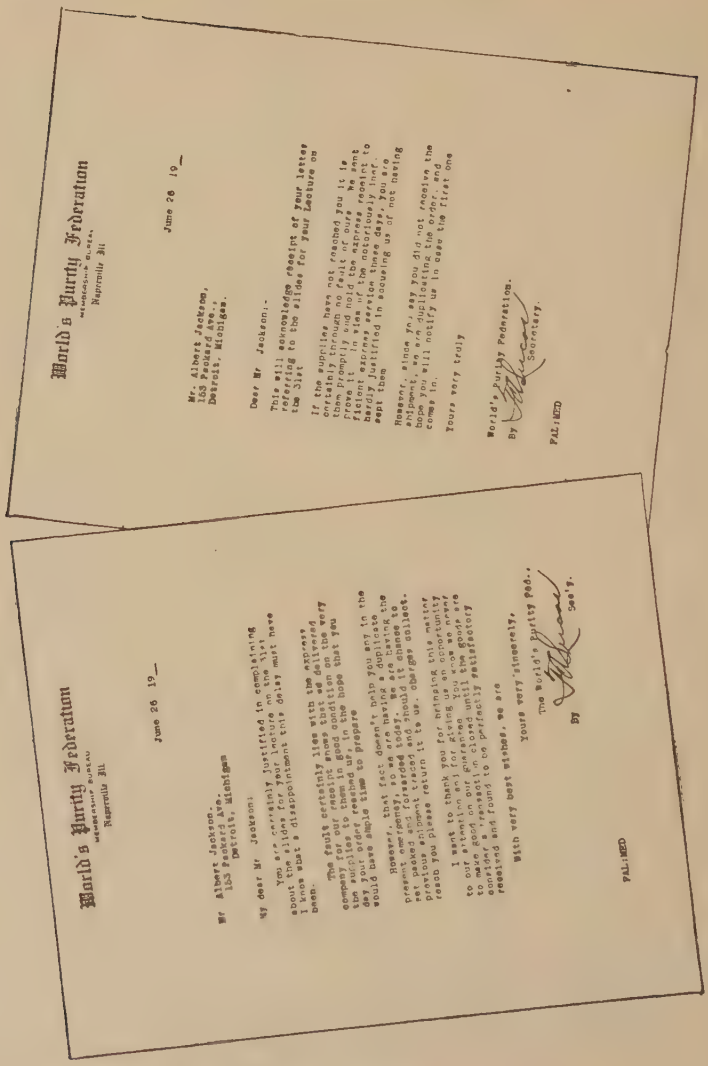
**2. The Volume of Mail.**—Between four and five billion pieces of mail are handled yearly by the United States. If tomorrow, you might have a panoramic view of the thousands of fires being kindled by discarded mail matter you would get some idea of the tremendous waste in direct mail advertising. The sight of your own inspired copy going up in smoke might make your blood boil but it would make you sit up and take notice. You would get busy and find out the reason for your failure.

**3. Why Do Business Letters Fail?**—There are five main reasons why business letters fail to accomplish the desired result. This failure is due either to their form, their word-

ing, their tone, their readers or their contents. Each cause will be discussed in the following paragraphs:

**4. The Form of a Letter.**—A manufacturer would not think of dressing up his star salesmen in blue denims and sending them out to make sales and friends for the firm. And yet, that is exactly what many sales-managers are doing when they mail poorly clothed letters. The letter reproduced on page 374 is a very clever example of letter salesmanship, and yet when first tested it pulled only about

A POOR LETTER IS AN INSULT.



World's Purity Federation
MEMBERSHIP BUREAU
Naperville Ill

June 26 19__

Mr. Albert Jackson,
155 Packard Ave.,
Detroit, Michigan.

Dear Mr Jackson:-

This will acknowledge receipt of your letter referring to the slides for your Lecture on the 31st

If the supplies have not reached you it is certainly through no fault of ours. We sent them promptly and hold the express receipt to prove it. In view of the notoriously inefficient express service these days, you are hardly justified in accusing us of not having sent them

However, since you say you did not receive the shipment, we are duplicating the order, and hope you will notify us in case the first one comes in.

Yours very truly

World's Purity Federation.
By [signature]
Secretary.

PAL:MED

World's Purity Federation
MEMBERSHIP BUREAU
Naperville Ill

June 26 19__

Mr Albert Jackson,
155 Packard Ave.
Detroit, Michigan

My dear Mr Jackson:

You are certainly justified in complaining about the slides for your lecture on the 31st. I know what a disappointment this delay must have been.

The fault certainly lies with the express company for our receipt shows that we delivered the supplies to them in good condition on the very day your order reached us, in the hope that you could have ample time to prepare

However, that fact doesn't help you any in the present emergency, so we are having a duplicate set packed and forwarded today. We are having the previous shipment traced and should it chance to reach you please return it to us. Charges collect.

I want to thank you for bringing this matter to our attention and for giving us an opportunity to make good on our guarantee. You know we never consider a transaction closed until the goods are received and found to be perfectly satisfactory

With very best wishes, we are

Yours very sincerely,
The World's Purity Fed.,
By [signature]
Sec'y.

PAL:MED

Showing the two standard methods of indicating the paragraph, incidentally, the right and the wrong way to answer complaints.

½ of one per cent because of the fact that the filling in of name and address was poorly done. Three months later the same letter on good bond paper with carefully typed fill in was mailed to the identical list and brought over 6% returns. The difference between ½ of 1% and 6% is the difference between failure and success.

5. **The Effect.**—"But," you say, "readers are not interested in examples of clever typewriting or artistic printing. They want only the facts about the goods described." In a sense this is true, but if you want your letters read, if you want to sell goods, you must take every precaution to see that the first impression is a good one. Remember that every letter you write is a photograph of the individual or business behind it.

6. **What is Good Form.**—Sometimes for the purpose of securing attention a correspondent may find it valuable to adopt an unusual form for his letter. Generally speaking, however, it is safer to stick to the standards which have been tried and proven.

a. Use a standard size sheet of paper 8½x11 inches.
b. Use a standard size envelope 3½x6½ inches.
c. Use business stationery with a business letterhead, printed or engraved, for all business letters.
d. Adopt a uniform position for dates and addresses.
e. See that the margins balance each other, the top and bottom, and left and right.
f. Avoid saying too much, and thus making the whole letter appear cramped.
g. Adopt some standard system of indentation and stick to it.

7. **Indicating the Paragraph.**—There are two standard methods of indicating the beginning of a new paragraph in a letter, first by indenting the first line, and secondly by allowing double the space between the paragraphs. Some correspondents accomplish the same result by indenting every line in the paragraph except the first. Examples of the two preferred methods are shown in the accompanying illustration.

8. **The Address and "Fill In."**—It has been argued that a filled in letter, no matter how cleverly executed, fools no one. Anyone accustomed to receiving large quantities of mail is able to tell at a glance whether a letter is individually typed or whether it is a filled in reproduction. There are,

The following letter illustrates some of the common errors in letter form. The letterhead is too near the top, the margins do not balance, the indentations are irregular, and the whole letter appears cramped and carelessly written.

Century School Supply Co.

(NOT INCORPORATED)
MANUFACTURERS AND PUBLISHERS OF
SCHOOL SUPPLIES BOOKS AND
APPARATUS
NO. 70 LOOMIS STREET

Naperville, Ill.
March 9, 1923.

Messrs. J. L. Michols & Co.,
Naperville, Ill.

Gentlemen:

Permit us to call your attention to the circular sent you recently of our holiday greeting cards, also cabinet assortments, as per your request.

We sincerely trust that the circular has reached you safely, and that you have had time to look into our proposition.

May we submit for your kind consideration, a sample assortment of our publications at actual cost, so that we may demonstrate to you the wonderful value, and high character of our offerings? In your reply, will you be good enough to state what priced goods you may be interested in, so that we may take care of your requirements intelligently?

In connection with the above, we wish to add that we have been enjoying a tremendous success this year, and we feel that it will be to our mutual interest, if you will give our publication your careful consideration.

Hoping to be favored with your early reply, and that we may have the pleasure of serving you, we are

Very truly yours,

CENTURY SCHOOL SUPPLY CO.

HAP/MM

however, certain sales schemes which bring satisfactory results if the letters are good imitations of real letters. In all cases where the "fill in" is used, the size and style of type and the color of the ribbon must be accurately matched. In an exhaustive series of direct mail tests a large Chicago concern found practically no difference in the percentage of replies between hand and machine addressed envelopes, or between filled in and unfilled in letters. On the other hand it is often claimed that returns are slightly increased through the use of a plain white, unprinted envelope. There is a decided air of mystery about such an envelope which leads a man to open it up and see what its all about. The increased return is not enough to figure on, but it makes possible a saving on the cost of envelopes.

**9. A Real Form Letter.**—There are certain individuals who believe that the form letter of today is doomed to failure. It is at best, they argue, a makeshift, and an attempt to deceive that does not deceive. It must be admitted that form letters are getting too common and that in some respects they do not bring the proper results. For example, take the experience of the Automatic Lock Company. Their sales-manager wrote an unusual letter and had it multigraphed, filled in on a typewriter and mailed to a test list of dealers. It brought only 3½% of inquiries. Not satisfied with the results he hired extra typists and had each letter individually typewritten, and individually signed with pen and ink. In one of the paragraphs he referred to the business of each individual dealer, by name. He used the same letter, mind you, with these few changes and the results simply staggered him. Instead of 3½% returns the letter pulled an average of 68% on the entire list. This is not an imaginary case. It actually happened.

**10. The Necessity For Tests.**—The method of addressing, the color of the ink, the color and grade of paper, all may enter into the success or failure of your form letters. The safe rule is to test first and save the plunge until you are sure of the result.

**11. The Wording of a Letter.**—We come now to a discussion of improper wording as a cause of letter failures. A communication in which words are misspelled, grammatical errors occur, punctuation marks are misplaced, or meaningless words and phrases are used, cannot fail to create a bad impression on the mind of the reader. Spelling, grammar and

punctuation are elementary subjects and need not be discussed here. Study and practice, alone will bring proficiency in them. Let us merely point out how easy it is to change the entire meaning of a letter by the simplest error in spelling or the misuse of a punctuation mark.

**12. The Importance of Punctuation.**—A young man writing to a friend says:—"I was married last Sunday night for the first time in five years; the church was full." He intended to say: "I was married last Sunday night; for the first time in five years the church was full." Here is a list of nine people: Mr. Smith, a merchant, his son, a lawyer, Mr. Jones, a clergyman, his wife, a milliner, and a little child. By changing the punctuation we have but five:—Mr. Smith, a merchant; his son, a lawyer; Mr. Jones, a clergyman; his wife, a milliner; and a little child.

A clergyman, one Sunday morning received a note from a parishioner, which in his haste he read from the pulpit as written:—"Captain John Smith, having gone to see his wife, desires the prayers of the Church for his safe return." The note should have been written thus:—"Captain John Smith, having gone to sea, his wife desires the prayers of the church for his safe return." These examples illustrate the importance of punctuation and spelling. In themselves they are simple and ridiculous, but in a business letter they might prove of grave importance. There is only one good rule for punctuation and that is to punctuate where the sense requires it.

**13. Useless Words and Phrases.**—So many letters today are still cluttered up with a lot of meaningless and insincere phrases. Here is a fair example:

> Dear Sir:—We wish to acknowledge receipt of your esteemed favor of the 28th ultimo, and to advise you that same has been duly noted. As per your request we hand you herewith descriptive circular of the Hercules Hammer. We sincerely trust that you will favor us with an order.
>
> Hoping to be advised of your decision, we are
>
> Yours truly,

Can you imagine a salesman walking into a man's office and trying to get business with a sales talk like that? The chances are that he wouldn't get a single order. And yet thousands of sales letters just as stilted and just as mean-

ingless are written and mailed every day at an approximate cost of 15 cents each. The salesman would say something like this:—

> Good Morning, Mr. Brown—If you will give me two minutes of your time I can show you a simple method of increasing your sales, or
> Good Morning, Mr. Brown:—Here is a sample of the Hercules Hammer you wrote about.

Why cannot the business letter start out just as naturally and give the man the information he wants, without using a lot of 18th Century stuff?

**Expressions to Avoid and Why**

| | |
|---|---|
| "We acknowledge receipt"<br>"We are in receipt of"<br>"We wish to acknowledge"<br>"to hand" or "at hand" | too formal, and absolutely unnecessary. |
| "Your esteemed favor"<br>meaningless and insincere. | "Your kind letter" |
| "Contents duly noted" | —Always taken for granted. |
| "Beg to advise"<br>"This is to inform" | unnecessary and unbusinesslike. |
| "We sincerely trust" | —do you really mean it? |
| "Instant"<br>"Ultimo" | talk "United States." |
| "Attached hereto"<br>"Inclosed herewith" | superfluous. |
| "We would suggest"<br>"We would state" | unnatural, say: we suggest. |
| "Hand you" | —impossible in a letter. |
| "Agreeable to your request"<br>"Per your request"<br>"Same" | faulty English. |
| "Trusting that"<br>"Hoping that"<br>"Thanking you"<br>"Regretting"<br>"etc." | the mark of a weak ending. |

"DICTATION MISS SPARKS PLEASE"
"AH· HM- SPIEGEL AND SPOGLE RED WING MINNESOTA GENTLEMEN"
REPLYING TO YOURS OF 28TH ULTIMO WILL SAY·"
"-THE ORDER WHICH YOU HAVE HONORED US WITH HAS BEEN DULY SHIPPED·"
"YOU WILL FIND THIS SHIPMENT EQUAL IF NOT SURPASSING ANY OTHER LINE WE HAVE SHIPPED YOU IN PREVIOUS YEARS"
"WE COUNT YOU AS ONE OF OUR BEST CUSTOMERS AND OUR MR MARTIN SPEAKS HIGHLY OF YOUR BUSINESS INTEGRITY·
- AND GENERAL HIGH STANDING IN YOUR COMMUNITY·
THANKING YOU FOR PAST FAVORS AND BESPEAKING FOR YOU A PROSPEROUS YEAR·
"WE BEG TO REMAIN MOST CORDIALLY YOURS ETCETERA ETCETERA
HAVE A THOUSAND COPIES MADE MISS SPARKS THAT'S ALL RIGHT NOW
PINGEY

(Reproduced by permission of the New York Tribune)

"SO MANY LETTERS TODAY ARE STILL CLUTTERED UP WITH MEANINGLESS AND INSINCERE PHRASES.

**14. The Complimentary Close:**—As indicated above there are many useless words and phrases commonly used in business letters. This fact, in the opinion of many correspondents, applies equally as well to the complimentary close. Why end up your letter with "Yours very truly," "Yours truly," or "Yours respectfully" when you can so easily make the last words mean something. "Earnestly," "Wholeheartedly," "Cheerfully," "Hopefully," "Desperately," "Good Luck," "Yours for Service," "Yours for Bigger Sales," "Always at your service," or "Until next time" are just a few unusual closes which do away with formality, and help make your letters intimate and personal.

### Rules For Avoiding Common Errors in English

**a. Do not sacrifice good English for the sake of brevity.**

Incorrect: According to instructions will cancel order

Correct: In accordance with your instructions we are cancelling your order.

**b. Do not use legal terms unnecessarily.**

Incorrect: This party claims you have interfered with his territory.

Correct: This person claims, etc.

Incorrect: We are enclosing the said documents.

Correct: We are inclosing these documents.

**c. Do not split infinitives.**

Incorrect: We are trying to fully protect our salesmen.

Correct: We are trying to protect our salesmen in every way.

**d. Be careful in using shall and will.** In some cases they express simple futurity, in others determination. The following examples show their correct and incorrect use when it is desired to express futurity:—

Incorrect: I (we) will be glad to meet Mr. Jones.
You (he, they) shall be glad to meet Mr. Jones.

Correct: I (we) shall be glad to meet Mr. Jones.
You (he, they) will be glad to meet Mr. Jones.

The following are examples of the right and wrong use of shall and will when it is desired to express determination:

Incorrect: I (we) shall not submit to this outrage. You (he, they) will not submit to this outrage.
Correct: I (we) will not submit to this outrage. You (he, they) shall not submit to this outrage.

**e. Use "who" and "whom" correctly.**

Incorrect: Whom do you think you are?
Correct: Who do you think you are?
Incorrect: The man who we sent for is here.
Correct: The man whom we sent for is here.

**f. Use "can" and "may" correctly.** Can implies ability; may, permission.

Incorrect: Can I send you this attractive booklet?
Correct: May I send you this attractive booklet?
Incorrect: Man may not fly to the moon.
Correct: Man cannot fly to the moon.

**g. Do not use "advise" or "post" where you mean "inform."**

Incorrect: This is to advise you that we have moved into larger quarters.
Correct: This is to inform (or notify) you, etc.
Incorrect: Keep me posted.
Correct: Keep me informed.

**h. The use of "effect" and "affect."**

Incorrect: What affect will this action have?
Correct: What effect will this action have?
Incorrect: The election has affected a great change.
Correct: The election has effected a great change.

**i. Use the word "only" properly.**

Incorrect: He was only in business two years.
Correct. He was in business only two years.

**j. The proper use of capitals.** Capital letters should be used:—

a. For the first letter of the first word in a sentence, or line of poetry, or of a direct quotation.
b. Proper names and adjectives derived therefrom should begin with a capital.
c. Names of the month, the days of the week, nations, cities, political parties, religious denominations, and parts of the country should start with a capital.

d. Capitalize personal titles and names of Departments, such as President, Floorwalker, Shipping Department.

e. Do not capitalize directions, or classes of merchandise.

**15. The Tone of a Letter.**—The tone of a letter may be the one big reason for its failure. Analyze every letter you send out. Is it original? plausible? clear? friendly? courteous? dignified? enthusiastic? forceful? If it lacks any one of these elements, you had better do a little revising. One correspondent found it payed to keep an extra carbon copy of every letter he wrote for a month. Several weeks afterwards he sat down and analyzed them carefully. He saw at a glance that some of the letters were carelessly or hurriedly written, that many of them were lacking in friendliness or tact, or enthusiasm, and that in practically every case he could suggest certain little improvements, to bring out certain interesting points, which in the enthusiasm of the writing he had overlooked. Read your letters over, then, when they are "cold." From them you will learn many valuable lessons.

**16. Business Letters Are Friendly Letters.**—As a general rule the letters a man writes to his best friend are successful letters. The friend is made to feel that the letter is for him and for him alone. No one else matters. The salesman on the road talks straight to the prospect and not for the benefit of any one else in the office who happens to be listening. His success depends largely on his ability to make friends. A sales letter, or any other letter for that matter, must accomplish these two things. It must make friends with the reader and it must make him feel that the letter is written expressly to him and for his especial benefit. In other words, your letter must have a personal tone.

**17. How to Get the Personal Tone.**—There is only one method of putting a personal note into your letter and that is to show a personal interest in the customer himself. If you are trying to sell him an article show him how it will benefit him. If you are adjusting a complaint, emphasize the fact that you value his good will and that you are not satisfied until he is. In collection letters, make him realize that you understand his position, and that you want only what is right and just. And in routine correspondence try

Mr. Physician:—

Why is it that you—the friend of humanity—are compelled to lose more good hard cash than any other man in business?

Every month you have to charge up to loss scores of good fat accounts that dead beats refuse to pay. Mrs. Tom puts you off; Mr. Dick wants more time and Mr. Harry moves away; and so it goes season after season. You could take a month's vacation and buy a new car every year with the money you lose in this way.

Now suppose I could tell you how to stop all this; suppose I could tell you of a simple collection scheme used by one Doctor that enabled him to make thirty of his hardest and slowest customers pay up—penny for penny—the hundreds of dollars they owed him. Wouldn't you jump at the chance to get it?

Well here it is—the simplest, most successful system ever devised; a system that does not require the assistance of an expensive collector; a system that you can operate without extra help—and the only expense is the cost of two or three two-cent stamps, and a few minutes of your secretary's time.

Send no money. I am so sure that my system will collect in your accounts that I want to send it right along to you without any risk or obligation on your part. Just pay the postman $1.00 plus a few cents postage, give the system a fair and impartial trial for thirty days, and if at the end of that time you are not absolutely satisfied, you may return it at my expense and back comes every cent of your money. That's fair, isn't it?

Don't bother to write a letter. Just sign your name on the enclosed stamped return card, and mail today. Until you try this system you will never know what it is costing you now to be without it.

Expectantly yours,

A LETTER THAT MADE GOOD.

to make a friend of your customer, by showing real interest in his success and in his problems.

18. **The Difficulty.**—"But," you say, "It is easy enough to use the personal touch in individual cases, but what am I to do with my form letters?" "Must I know each customer personally?" Certainly not. That would be impossible in a large business. But you must learn to consider each customer as an individual. You must learn to divide your prospects into certain broad groups, each member of which has certain likes or dislikes, and certain well defined problems. And finally you must be able to visualize some typical member of each group, and to write your sales letter directly "at" him, just as the successful orator singles out one individual in his audience.

One correspondent had the mistaken idea that he could make his reader believe he was getting a personal message merely by telling him so. He started out in this manner:

> Dear Sir:—
>
> This is really a personal letter, but as I have a number of them to write, and as time is short, I have asked that they be printed and a copy sent to you.

In the following examples the reader doesn't need to be told that he is reading a personal message:

> Dear Sir:—
>
> Believing you will want it, I have set aside a copy of a valuable directory, just off the press.
>
> Dear Sir:—
>
> If you could throw a golden ray of sunshine across the threshold of the bluest day your wife and babies will ever see—the day when you are called to the great Beyond—wouldn't it be worth while?
>
> Dear Sir:—
>
> If you should be visited tomorrow by an Internal Revenue man, investigating or checking up your income tax return,
>
> Dear Sir:—
>
> I want to talk to you a moment.
>
> I want to talk to you, and your wife, and your children.
>
> I want to talk prosperity, the prosperity of your

home, your family, your business, your city, and your country.

**19. The "You" Element.**—A great many correspondents fall down because they think and write in terms of "I" or "We" instead of in terms of "you." The average buyer is not particularly interested in you or in your business. He is more interested in himself and in his own business than he is in anyone or anything else in the world. For instance, a certain small town merchant sends out every month an appeal which reads something like this:—

Dear Sir:—

We are showing this season the most attractive line of men's furnishings we have ever handled. Our styles are correct and up to the minute in every respect. We have built up a reputation among the best dressed men in town and we assure you that we can supply just what you want in our line at prices which are right. Give us an opportunity to prove it.

The words "we," "our," and "us" appear exactly eight times in this letter. The word "you" is used but twice. The writer evidently thinks four times as much about his own business as he does about the customer's. The same letter could be rewritten from the buyer's viewpoint to read thus:—

Dear Sir:—

If you could save $10.00 on every suit of clothes, $2.00 on your hats, $2.00 on every pair of shoes and 50 cents on all your neckwear and handkerchiefs, you would have an extra $50.00 in the saving account at the end of the year. Drop into our store the next time you are down town. Compare our prices with those you have been paying elsewhere for the same quality of material and workmanship. You must be satisfied before we are.

Here the proportion is just reversed, there being seven "you's" to three "we's," and the direct appeal to his pocketbook leads the reader into the store at the very first opportunity.

Again a manufacturer of printing machinery writes:—

"If we cannot show you a great saving of time, if we cannot eliminate waste or spoilage—if we cannot fold more uniformly with a speed of 6000 to 9000 on

anything from onion skin to tag stock—then I give you my word you won't be bothered."

In this letter the printer sees the advantages of the machine in spite of the "we" attitude. At the same time the appeal would be far stronger if the identical thoughts were expressed in this manner:—

You can save time.

You can eliminate waste and spoilage.

You can fold anything from onion skin to tag stock at the rate of from 6000-9000 an hour, and you can fold more uniformly than you have ever folded before.

If the "Peerless" does not prove its worth in ten days you are under no obligation to keep it.

**20. Rules for Improving the Tone of Your Letter.**—To summarize briefly, the right tone in a business letter can best be secured:—

a. By reading your letters over when they are cold.
b. By writing as if you were talking to your best friend.
c. By showing a personal interest in the person addressed.
d. By grouping your prospects and making your appeal to a typical member of each group.
e. By forgetting yourself and writing more about the other man's profits, savings, needs, or desires.

**21. The Mailing List.**—Volumes might be written on the make up and checking of mailing lists. For our purposes it is only necessary to point out the fact that even though your letters are perfect as to form, wording, tone and contents, they cannot make sales unless they reach the right class of people. Many a writer of excellent letters has been considered a failure because his letters were never mailed to the right list, and on the other hand, many carelessly written letters do produce satisfactory results simply because they reach people who are in the buying mood. The mailing list, therefore, is of first importance. Names and addresses are constantly changing so that unless your lists are checked and revised regularly, you are losing money that might otherwise be yours. Frequently you receive friendly letters offering to send a free sample or a new booklet or some inexpensive premium if you will return the card. The chances are that the writer of that letter has

just one purpose in mind, namely, to correct his list. A plan of this kind is not always practical, but if the lists are worth addressing they are worth correcting.

**22. The Contents of a Letter.**—As we have already seen, friendly letters and routine business letters will ordinarily be successful if their form is correct, if they are properly worded, and if they are friendly and personal in tone. Sales letters are more complicated because of the fact that they are expected to do just what a salesman would do if he were personally calling on the prospect. Therefore, every word in your sales letter is important. Every thought must have a definite purpose. You must lead your reader step by step through a description of your product and an explanation of your terms, just as the salesman does when he is talking face to face with the buyer. You must get attention, arouse interest, create desire, and bring about action. Analyze your proposition, decide what is vital, leave out the non-essentials, and go straight to the point. Let us now consider the sales letter.

## Sales Letters

**23. What a Sales Letter Must Contain.**—A salesman does not go out on the road with just a general idea of the thing he wants to sell. He learns all he can about the article, studies the principles of salesmanship, and memorizes a model selling talk based on these principles. Just so with the successful writer of sales letters. He builds his letters on certain basic principles. Each one contains the following elements:—

a. An opening paragraph which attracts attention or arouses interest.
b. A description or explanation of the article.
c. Arguments or testimonials proving its worth.
d. Persuasion or inducement.
e. A clincher.

Naturally, all of these elements are not always found in a successful letter. In many cases a mere description of the article and an explanation of its use will suffice to get the order without any special inducements. But bear in mind the fact that in the vast majority of cases, unless you create interest and desire, unless you prove your statements, unless you convince the customer that he is sure to benefit,

and unless you present some logical reason for buying now, you cannot expect a high percentage of sales.

**24. The Start of a Letter.**—It is nine o'cock in the morning, and Mr. Average Man is reading his mail. Near by is the waste basket. He picks up each letter with a feeling of pleasure, rips it open eagerly, reads the opening paragraph, skims lightly over the balance, and tosses it regretfully into the already overcrowded waste basket.

Now, Mr. Average Man has the average man's troubles, and the average man's ambitions. He is constantly on the watch for constructive suggestions, labor saving devices, plans for increasing business, and stopping losses. Many of the letters he opens contain valuable information—means for making more money and saving more money and yet he tosses them sadly into the discard. Why? Simply because the opening paragraph of the letter—**the first few words**—failed to get his attention or arouse his interest.

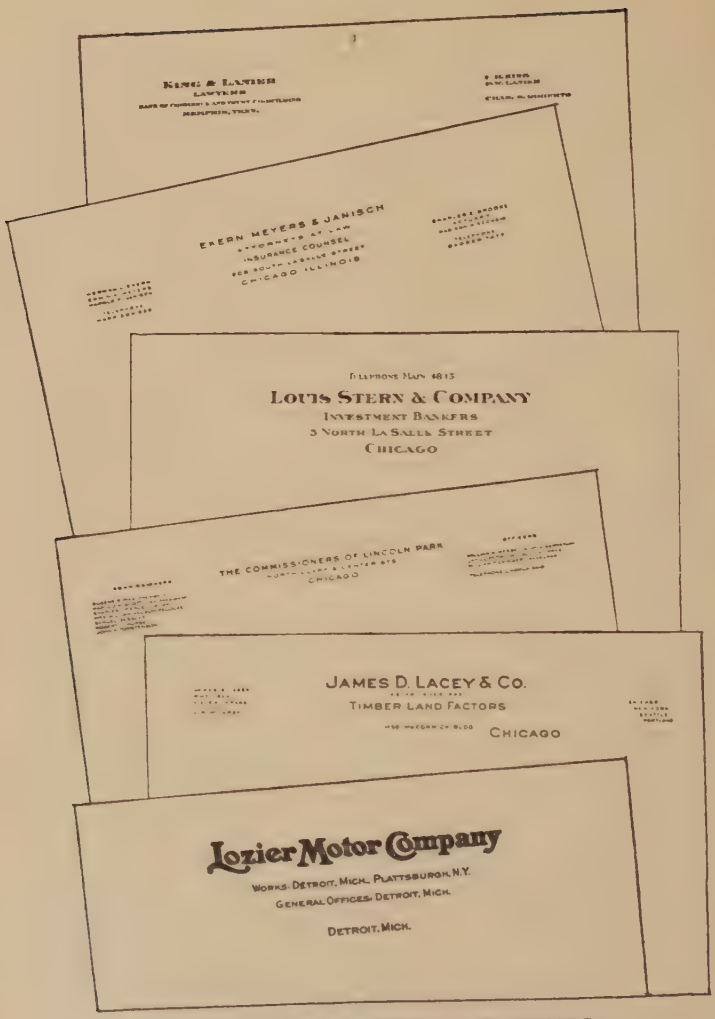
**25. Answering Inquiries.**—Suppose you are writing to a farmer who has answered your advertisement about drainage tile. He is already interested in your proposition and desires further explanation, and proof of its value. Is there any real reason why you should begin your letter in the way one concern did?—

> Dear Sir:
>
> In reply to your favor of the 16th, I beg to state that I am enclosing herewith a descriptive circular showing prices and freight rates on "Sheppard Non Breakable Tile" in car load lots, etc.

Why should the writer "beg to state" something that you have taken the trouble to write him a letter about? If you were a farmer and wanted to drain out that bottom forty, wouldn't you think more favorably of a man who started his reply in this manner?

> Dear Mr. Jones:
>
> Your letter shows that you want to find out all about tiling your farm in the cheapest and most lasting way. Am I right? Then I know just how you feel, and as drainage has been our main line for over thirty-five years, maybe we can give you some pointers that will save you both work and money.

The first letter is like a dash of cold water to the farmer. He feels that the writer is too far away to take any inter-




SPECIMENS OF BUSINESS LETTERHEADS.

est in his farm problems. In the second letter he feels as though the writer had jumped on a train and come right out to the farm to help him lay his tile properly. The salesmanship of the man who writes the first letter is worth about 25 cents an hour. There is no limit to the earning power of a man who can write a letter like the second.

Here are some other good ones:—

Dear Sir:

I am genuinely glad you wrote me about the "Iceless Refrigerator," and am more than delighted to tell you all about this new household necessity, which its thousands of friends declare to be the most economical refrigerator in the world.

Dear Sir:

Here is the sample of "Kant Leak" you asked for. There's enough to patch up all the cuts and bruises in your oldest casing. Do it today, Mr. Smith, and convince yourself that this is the greatest selling opportunity you have ever discovered.

Dear Sir:

I am glad you answered my advertisement, and I am going to prove to your entire satisfaction that you can double your present salary.

**26. Writing Direct Sales Letters.**—Suppose now that instead of answering inquiries you are writing a direct sales letter to people who never heard of you or your product. The first few words of the letter must take the reader's mind from other subjects and focus it on the specific product or service you are offering. They must arouse his interest. They must change that interest into definite desire.

**27. The Display Head.**—There are advantages to the display head or scare head with which some writers seek to compel attention. This consists of a short statement reproduced in capital letters, in red ink, underlined, or otherwise emphasized, having a tendency to make the reader sit up and take notice. Such a statement may be either in the form of a question, a command, or a declaration, thus:—

EVER WATCH A CONTRACTOR MOVE A BUILDING?

ARE YOU ADMIRED IN YOUR COMMUNITY?

WILL YOU COME WITH ME TO THE OTHER SIDE OF THE WORLD?

MAKE THE MOST OF YOURSELF!
STOP PAYING RENT!
SAVE ONE HUNDRED DOLLARS!
FREE PROOF THAT I CAN RAISE YOUR PAY.
FREE—10 VOLUMES OF EDGAR ALLEN POE.
SOME NUTS TO CRACK.

The advantage of the short opening lies in its power to arouse such interest or curiosity on the part of the reader that he will read the rest of the letter to find out what it's all about. Care should always be taken to be sure that the offer merits the interest aroused. If it does not, the whole effect is lost.

One disadvantage of the display head is that it immediately brands the letter as circular matter. It is rarely used in friendly or personally typewritten letters, and for this reason is often avoided in form letters. However, a modified form of the same idea can be used as an opening paragraph without any special emphasis, and still bring satisfactory results, as for example in these letters:—

Dear Sir:—

This letter is worth just ten times its weight in gold, if you will act promptly.

Dear Sir:—

Jones discovered twenty-three different ways in which he was losing money in his business.

**28. Arousing Interest.**—As already pointed out, it is not enough merely to attract the attention of the person addressed. You must interest him in your goods. This element may be worked into the body of the letter, or it may be included in the opening. The following paragraph gets attention and arouses interest at the same time:

Dear Sir:—

If you throw a $10.00 bill away you are out just ten dollars. If you toss this letter into the waste basket without reading it carefully, you may be out ten times ten dollars, because the offer it contains is worth **at least** that.

**29. Human Interest.**—There are many ways in which interest may be aroused in a sales letter. Appeals to the pocketbook are perhaps the most common, although there are a thousand and one things in which the average man is interested. Your problem is simply to pick out the one

appeal most likely to lead him gently but firmly to the point where he is not only willing but anxious to part with his money. Be careful, however, that you write about his interests, not your own. Throw in a little human interest. Tell him something new about the world in general or his business in particular and you have won his interest. A Publisher used the human interest story to good advantage, when he started his letter in this manner:—

Dear Sir:—

By the light of a wood fire in an humble log cabin of the middle west, a lanky, ungainly boy spent his evenings pouring over the few dog eared books that came his way.

Again a letter broker seeking orders for mailing lists gives the reader a very interesting bit of news and some good advice besides, when he writes:—

Dear Sir:—

In the 2,090,000 businesses listed in Dun's Commercial Agency last year, there were over 1,500,000 changes. This is just one more proof of the folly of using old names, one more reason why you should standardize on Smith's 100% guaranteed mailing lists.

**30. Rules for Starting a Sales Letter.**—To summarize briefly, the following should be borne in mind when starting a sales letter:—

a. Be sure that the first few words attract attention.
b. See that you arouse the interest of the reader.
c. Be sure that your offer is worthy of the interest you arouse.
d. Write about the reader's interests, not your own.

**31. Explanation and Description.**—Having secured the attention and interest of the prospect, your next problem is to present a vivid word picture of the article or service you seek to sell. This is a real problem. Experts in the art of writing, authors, and instructors in Rhetoric all agree that the ability to write good description is the rarest of literary talents. Why? Simply because of the fact that before you can make the reader actually see the article, you must know all about it yourself—you must have a vivid picture of it in your own mind. The first step, therefore, in effective description is to analyze and study the article from every

standpoint. Here is an example of description which does not quite ring true:—

> "Presto Paste" is manufactured expressly for printers. Our old customers tell us we have the best paste on the market for the newspaper trade. Their re-orders prove it to us.

The same material rewritten presents a vivid description in terms of the reader's needs:—

> Mix a little "Presto Paste" with cold water. It sets immediately. It does not sour. It cannot mold. You will find it the handiest, the most satisfactory and the least expensive "all purpose" paste you have ever used.

**32. Generalities.**—The next step in effective description is to cut out the non-essentials and dwell on those details which are unknown, or can be presented, to the buyer from a new viewpoint. Do not generalize or use worn out expressions, and be prepared to back up your claims by facts. The following paragraph is not convincing because it deals in generalities:—

> "Reliable" Ribbons are absolutely the best typewriter ribbons that money can buy.

Now, there are hundreds of typewriter ribbons on the market and while the "Reliable" may be the best, your description should tell why. Emphasize the points of superiority in this manner:—

> "Reliable" Ribbons are real ribbons. They cannot fade, blur, smudge, or dry out. Their impression stands out clean and sharp, even after weeks of constant use. Economy plus efficiency plus durability equals reliability.

**33. Interest.**—The real aim of description is to make the reader understand the goods and want the goods. Therefore, the next step in effective description is to use salesmanship in your description. Get the buyer's viewpoint and write with that sole idea in mind.

A furniture dealer might have said that his furniture was manufactured from the finest quarter sawed oak. How much more convincing another sort of description would be:—

"Have you ever had the experience of coming suddenly from the cold, cheerless darkness of the night into a warm, soft hued room where every piece of furniture, every drape and every light seemed to say 'Come in. Here is happiness. Here is **home?**' Let us help you plan such a room with our furniture."

A real estate dealer writes:—

"I am offering for sale a substantially built, seven room house, on a lot 100x140 situated in the best residential section of the city."

Compare with:—

The house faces South on a gently sloping lot, 100x140 feet. There are magnificent trees, and flowering shrubs, amid a beautiful lawn.

There are seven rooms and a bath. The living room is large and homelike with a real old fashioned log fireplace. The dining room overlooks the spacious lawn, the kitchen is warm and sunny. Upstairs the bedrooms are light and airy; the bathroom fitted out with tile floor and modern plumbing.

All this, mind you, in a neighborhood where everybody owns his own place, where there are no rented houses or apartments, where the word "home" means something.

There is a description that really describes. The picture it presents grips the interest of the reader and makes him want that house.

**34. Explaining a Service.**—About the same laws and rules hold good when the thing to be sold is a service rather than a definite article. Suppose, for example, that you are seeking to sell your knowledge and experience as an income tax expert. Which of the two descriptions below is more likely to drive home the point or get the order?

"My Income tax service is complete in every respect. I have filed tax returns for hundreds of corporations, partnerships, and individuals. There is no problem too big or too little for my organziation to handle in a prompt, accurate, businesslike and effective manner. A trial will convince you."

This expert appears to be patting himself on the back, an attitude to be avoided in the good letter. Note how clever-

ly another writer brought out the same facts without creating a wrong impression:—

> "Look here, Mr. Business Man, let me banish your Income Tax problems. Let me free your mind from doubts and fears. Let me save money for you just as I have saved thousands of dollars in taxes for other business concerns. In other words, let my service prove to you that March 15 is just like any other day in the year. The fee is comparatively small and is not payable unless the work has been completed to your entire satisfaction."

**35. Enclosures.**—Some description may be necessary in the letter even though an actual sample is enclosed. It is always well to point out distinguishing or superior features. The same is true when catalogs, descriptive circulars or other printed matter are sent in the same envelopes. These are valuable because they permit of more detailed description than would be suitable in the letter. A single sentence may by the assistance of the enclosures, tell the whole story simply and clearly:—

> "There is as much difference between the old fashioned pantry and the Kitchen Kabinet as there is between the ox team and the aeroplane."

But, remember, that no matter how attractive the sales literature may be, the sale itself must be made in the letter. Do not depend for success upon your enclosures alone.

**36. Rules for Description.**—To summarize there are five distinct rules for describing goods or service in a sales letter:—

a. Analyze and study the article from every conceivable angle.
b. Avoid non-essentials and the commonplace details.
c. Be specific.
d. Get the buyer's point of view and write in relation to his needs.
e. Use attractive enclosures, but do not rely on them alone.

**37. Proof.**—A successful sales letter must contain some convincing proof of your claims. You must satisfy the customer that your goods or your services will be of some benefit to him. You may know their value, but the custom-

er doesn't until you have proved it, by one of the following methods.

**38. Proof by Trial.**—A free trial is one of the simplest and most convenient forms of proof. Here is a straightforward offer which at once convinces the reader that the manufacturer means business:

> "Remember, there is no sale, no obligation until you are satisfied. Use the "sharpener" for ten days. If you are not fully satisfied, simply ship it back at my expense, and I will refund every cent of your money."

Here is still more convincing proof:—

> "Don't take my word for the value of these cigars. Don't take as final the judgment of the thousands of discriminating smokers who have used my brand for years. Let me lend you a box for a week—AT MY EXPENSE—so you can judge for yourself how good they are. If they do not compare favorably with cigars, selling for twice the price, send them back to me collect, and you will owe me nothing."

Surely, I reason, a concern would not dare make so liberal an offer unless there is real value in their goods.

**39. Proof By Tests.**—If your product is such that you can conveniently send a sample through the mail you can describe certain tests to prove its merit. A manufacturer of varnish makes use of an illustration in all his advertisements, showing a woman pouring boiling water on a varnished table, and this is a convincing proof of quality. A certain paper house sent out a sample of enameled stock with the following letter:

> "When you fold a piece of ordinary enameled stock, you know that the surface of the paper is broken. Apply the same test to this sample of Buckeye Enamel enclosed. Here at last is an enamel sheet that will fold as perfectly as a high grade bond."

A prominent life insurance company solicits business by sending out a miniature policy in which they call attention to certain new and important features. They ask the reader to compare these features with those found in his own or other policies. A paint manufacturer tells how to test the quality of paint, a tailor how to know an all wool grament from a

substitute, or a shirt maker how to test silks. In all these instances the reader learns something new and is given an opportunity to satisfy himself of the value of the thing offered for sale.

**40. Proof By Testimonials.**—Bona fide testimonials are a great help in sales letters, just as they are in personal salesmanship. If you can prove through direct and complete statements that your goods are used and liked by great men and leading corporations your chances of making sales are improved. Fake testimonials and unsigned statements, however, will do more harm than good. A sentence like the following offers no conclusive proof:—

> A prominent railroad official has just placed his order for his winter's supply.

Whereas this means something:—

> The Oliver Typewriter is standard equipment in the offices of Montgomery Ward & Company.

Give the complete name, title and address when quoting the letter:—

> Mrs. John Jones, 2345 Riverside Drive, President of your local Woman's Club, is a user of the Standard Encyclopedia and has this to say of it:—

Sometimes it is necessary to refer the reader of the letter to the complete testimonials or to a list of prominent users in a circular enclosed, thus:—

> Mr. Farrell says the Guide is worth a million dollars. Read his letter on the enclosed circular, etc.

or,

> The enclosed circular contains a list of the many influential corporations using the Multigraph to reduce printing bills.

**41. Indirect Proof.**—Frequently some indirect proof will answer the same purpose. Statements like "Ask any banker." "Consult your local physician" or "Your lawyer will verify the statement" are convincing because of their apparent sincerity. You do not follow up such leads because you feel sure that the statements will be verified. Proof of the salability of an article is also contained in this frank sentence:—

> "I just wish you could be here this morning to see the reports and orders which are pouring in from all over the country."

And finally cultivate sincerity. Your letter may contain a dozen other proofs, but it will fail unless its tone from beginning to end breathes frank, straight-forward honesty. On the other hand, sincerity alone may be eonugh to get the confidence of the buyer. In a letter sent out by a retailer there was not one word of direct proof, but it contained this unusual paragraph:—

> Many men come in who simply say: "Pick me out a nice suit—I'll leave it to you. You know my size." It is that kind of confidence in this store and its merchandise which makes business life worth while.

There are no names mentioned, no dates given. There is nothing to prove the statement and yet you are somehow convinced that it is true.

42. **Sincerity.**—Thus to summarize, a sales letter must be sincere. To be successful it must offer convincing proof of your sincerity and this result may be accomplished either:—

a. By the offer of a free trial.
b. By convincing tests.
c. By bona fide testimonials.
d. Or by some indirect method.

43. **Persuasion.**—Many sales letters fail because they lack the all important element of persuasion. Suppose, for example, that your line is radio, and that in your letter you have aroused the attention and interest of the reader, explained the advantages of your outfit, and proven its real merit. Now if you bring your remarks abruptly to a close and sign your name you will probably get some orders. Suppose, however, that instead, you proceed to show the reader how your machine will be of practical value to him by adding this paragraph:—

> "Aside from its countless entertainment features, a Radio Set may save you many times its price in marketing your produce. Only last week an Indiana farmer had a car load of hogs on the way to the Railroad when he received via wireless the news of a sharp break in the market. He held up the shipment for a few days until the flurry was over and sold at a decided increase. You, too, can 'tune in' every morning and get quotations on grain, cattle, hogs, or produce direct from the great central markets."

Perhaps the farmer has never thought of the matter in just that way. The letter persuades him that a radio outfit will put dollars and cents into his pocket. He is made to see the profit rather than the expense.

An investment broker accomplishes the same result when he summarizes his claims in this one brief sentence:—

> "Until you have our service, you will never know what it is costing you now, not to use it."

**44. The High Pitched Voice.**—Many correspondents try to emphasize their sincerity and to make a favorable impression by capitalizing or underlining words and phrases in their letters. In some cases this plan is valuable but it is easily overdone. Too much emphasis on non-essentials destroys the reader's interest in the really important matters. The following paragraph is taken from a letter sent out by a Publisher advertising a new book:

> "THE CHARMINGLY GRACEFUL AND COURTEOUS SOCIAL LETTER which STRIKES EXACTLY THE RIGHT CHORD justly creates an EXTREMELY FAVORABLE IMPRESSION of the writer, who, if able also to converse and to speak READILY AND INTELLIGENTLY, to use EXPRESSIVE and EXACT ENGLISH, has an ASSURED POSITION among CULTIVATED and SUCCESSFUL people. THIS NEW BOOK is a WONDERFUL AID to the READY USE of English in LETTER-WRITING or in CONVERSATION. There is no other book like it. To the NOVICE as well as to the SCHOLAR, its value will be IMMEDIATELY APPARENT."

Here is effective persuasion and yet when you receive such a letter you cannot fail to feel the writer's determination to sell you something. It's just exactly as though an enthusiastic young salesman dashed into your office and in a high pitched voice demanded that you give him your order. Nine times out of ten he wouldn't get the business even if you recognized a real need for his product.

**45. Persuasion By Exhortation.**—Lead the prospect to do willingly what you want him to do. Do not make a strained effort to get action at the end of the letter. "Do it now," "Don't delay another minute," "Can you afford to be without this time saver," and similar exhortations accomplish

very little unless the way has been properly paved for them, or unless you are on friendly terms with your reader. Weave your persuasive arguments into the body of the letter. Present every fact from the buyer's viewpoint and let his common sense judgment do the rest. You cannot command him to do something that he doesn't want to do. One correspondent is successful when he sums up the whole letter in this way:—

> "These are the facts. The decision is in your hands. Your order will be filled the same day it reaches us."

**46. Other Forms of Persuasion.**—No matter what form of persuasion you decide to use, be sure that your appeal will strike a responsive chord in the reader's mind. If you are advertising a correspondence course, you appeal to ambition, if you are selling a luxury you appeal to pride or love of pleasure; and so on down the list. A book publisher made this unusual appeal when he wrote a letter to Fathers and Mothers:—

> "What a wonderful thing it is to feel yourself responsible for a human life. But, oh, how much more exalting is the knowledge and power to meet decisively the first fundamental questions in the life of your own flesh and blood. The 'PARENT'S GUIDE' will give you both the knowledge and the power."

**47. Special Inducements.**—Persuasion may take the form of some special inducement such as a marked reduction in price, a special introductory offer, a limited supply, a free sample, or an extra package if you send your dealer's name. For example a publisher writes:—

> "There are only 73 sets offered at this special price. Use the enclosed postal promptly as these few sets will be snapped up at once."

A magazine publisher offers a specific inducement when he says:—

> "As our gift we will give you free a large sized reproduction in full color, all ready for framing, of VanDyck's beautiful Baby Stuart, the most popular of this great artist's many paintings, if your card is received in two weeks."

There is hardly a sales plan which does not permit of some special inducement to get prompt action. You may offer

Dear Friend:—

NO MORE "COLDS" IN HEAD OR THROAT

The bitter cold months of winter are here.

There are sure to be damp days; wet, slushy days; days when the chill, raw winds go through you like a knife.

Now is the time to protect yourself against "colds" and other menacing kindred diseases resulting from exposure to inclement weather.

"Cold" in the head or throat is a GERM DISEASE. The "cold" germs usually attack the nasal passages. These germs multiply rapidly, and unless checked, will affect any part of the body, usually the weakest spots. What begins as a simple "cold" may result in serious complications.

The "Sanequo Vaporizer" is a simple, scientific device for home treatment, which is both preventive and curative. It combats "germ growth" by stimulating the flow of serum from the "serous glands"—a perfectly natural healing process.

Carry the "Sanequo Vaporizer" in your vest pocket. Use it when the first symptoms of a cold are noticed. It is quick and effective—always ready for service. This handy device may save you many days of discomfort and suffering.

Don't "sniffle and snuffle" all winter. Don't be the constant victim of "colds," catarrh and kindred ills.

The "Sanequo Vaporizer" will keep your breathing tract clear—it is real protection—and it comes to you complete for TWO DOLLARS. Start the Sanequo "Cold Insurance" Blank on its way right now.

Very truly yours,

Note the display head, the news interest, the persuasive element, and the simplicity of ordering.

premiums of all kinds, agree to accept small monthly payments, allow long time or future billing, warn customers of an approaching advance in price, or agree to furnish special services. Under ideal circumstances the inducement will gather up and emphasize all the advantages of your offer, and thus turn desire into action:

> "We will not only ship the machine by express prepaid for a week's examination, but we will send you Professor Hertz' 500 page volume entitled 'Pleasure and Profit In Radio.' This is free if you act promptly."

**48. The Danger** of an attractively presented inducement lies in the tendency to overdo the thing. An interesting beginning may fool a reader into finishing the letter, but it won't bring any business unless the proposition is a worthy one. Similarly it does not pay to play up in big type an inducement which in reality is scarcely worthy of mention. The one rule to be followed in this respect as in all others, is to adopt the golden rule in business, and to show your customers that you are on the square.

**49. The Clincher.**—The final test of a successful sales letter is the clincher. You may have aroused the interest of your reader; perhaps you have explained your proposition to his entire satisfaction and proved every statement; you may have convinced him of a real need and offered him an extra inducement which has created real desire in his mind. What are you going to do about it? Are you going to rest your case there, or will you clinch the order now?

**50. The Salesman as a Model.**—What does the salesman do under similar circumstances? If he is a real salesman he summarizes his selling points and lays before the prospect a convenient order blank, lacking only the name on the dotted line. He gives you something to sign and makes it hard for you to refuse. On the other hand the inexperienced salesman may have been just as clever in his sales talk and your own desire may be just as urgent, but if instead of asking for the order then and there he promises to see you next week, the whole effect of his argument may be hopelessly lost. In your sales letters you can profit by the example of the star salesman, and by the mistakes of the order taker.

**51. The Failures.**—Thousands of letters are put into the mail every day lacking this one vital clinching element. How

many times have you received letters which worked you up to the point where you were anxious to buy, and then closed with some superficial statement like this: "I would be glad to give you any further information you desire" or "Hoping to hear from you by return mail?" The waste basket claims them one by one. The same letter would fairly shake the money from your savings account if it ended up with a real clincher such as:

"Simply wrap a $2.00 bill in this letter and mail it at my risk, today," or "The card brings everything without risk or obligation on your part."

**52. Coupons and Cards.**—The nature of your product will determine the best form of clincher to use. The little paragraph above is just one example. Every sales proposition can be improved by the use of a similar device. Make it easy to order. Include a return postal card requiring nothing more than a signature. The coupon or application blank printed at the bottom of the letter or on the descriptive circular is sometimes effective. Here are a few examples:

"But this is for prompt orders. So sign and mail the handy card at once."

"Let us send you this lamp for a week's examination. The card brings it. Merely drop it in the mail."

"Just sign the coupon below—that's all. Place it in the enclosed addressed envelope—and mail it right now."

"Don't send any money. Just check the style wanted on the enclosed card and mail today."

"The enclosed card is signed, addressed, and stamped, ready for mailing. It will bring our representative to give you an accurate estimate without any risk or obligation on your part."

"Pick up the telephone now, while the matter is before you, and let us do the worrying. Ring Drexel 2858."

You have noticed the similarity in all these closing paragraphs. The reader is given something to sign or some simple little act to perform. He doesn't have to sit down and write or dictate a letter or order. All that is taken care of. The writer has made it so easy to order that he just can't find a good excuse for not acting. That is the main idea of the clincher, to get action, and unless you know

and understand its possibilities you are going to write a lot of letters without getting very much action.

**53. Rules For Clinching Sales.**—Briefly then, the duty of the clincher is to get immediate action. Remember the following rules:

a. Make it easy to order or reply.
b. Give some real reason for prompt action.
c. Make your coupon or return card simple and easily understood.
d. Don't try to bully or force your prospect against his will.
e. Never write a sales letter which does not demand a reply of some kind.

If you will follow these few simple fundamentals you will soon find that the increased returns will pay you a thousand per cent on the extra time and thought expended.

### Routine Business Letters

It is not only in the realm of sales letters that losses occur. Ordinary routine letters when carelessly or thoughtlessly written may be the chief reason for a falling off of business or loss of good will. If you are acknowledging orders, adjusting complaints or collecting accounts, cultivate the friendly tone. Make your letters clear, neat, courteous, and as brief as the circumstances will allow.

**54. Classifying Routine Correspondence.**—The first step in solving this particular problem is to recognize the essential differences between the several types of routine letters and to classify your correspondence accordingly. There are four broad groups of routine business letters, namely, inquiries, orders, complaints, and credits, each of which must be written from a different viewpoint. The forms suggested below are simple and effective, and may be varied to fit any particular need.

**55. Writing Inquiries.**—Although inquiries may lead to sales, to adjustments or to the granting of credit, they must be considered in a class by themselves. Fundamentally, they are requests either for information or for favors. Great care should be used, therefore, to avoid asking for information that you might easily obtain yourself, or for favors that can only be granted at the cost of great personal sacri-

fice or inconvenience. As a general rule business ethics require a stamped return envelope and a letter of thanks in all unsolicited inquiries.

**Request for Information**

A friend has recommended your Safety Razor Sharpener. Please give me information on the following points:—

Will your Sharpener take all blades or is a special model required for the Durham Duplex Razor?

What is the retail price and what will be the cost to me in dozen lots?

Yours very truly,

**Asking a Favor**

The Hon. Frank Reid,
Washington, D. C.
Dear Mr. Reid:—

For some unknown reason the Superintendent of Documents has removed our name from the list of those entitled to receive the government crop reports.

As these bulletins are vital to the success of our business, we want you to investigate the matter and see what can be done about it.

Your assistance will be deeply appreciated.

Sincerely yours,

**56. Answering Inquiries.**—All inquiries should be answered promptly, fully and courteously. Tell your correspondent what he wants to know. Suppose, for example, you are manufacturing automobile parts and you get an inquiry for a radio receiving set. There are three courses open to you. If you ignore the letter entirely, you are ignoring the rules of common decency. If you write a curt letter denying your interest in radio sets you are still lacking in courtesy. If, however, you write a pleasant, friendly reply telling the applicant where the sets may be secured, you are doing the decent, courteous thing. Such a letter may take up your time and energy, but it nevertheless creates a favorable impression and may open the way to future sales.

**Letter of Information**

If you will consult page 14 in the catalog which is coming in this mail, you will find a complete description of The Automatic Razor Sharpener.

The three models take care of (1) Gillette Blades, (2) all single edge blades, and (3) Durham Duplex Blades.

The retail price is the same for all models, $2.50 each. As a dealer you are entitled to a discount of 40% in dozen lots.

We will be glad to make up an assortment and ship by express prepaid immediately upon receipt of your order.

Yours very truly,

**Granting a Favor**

I have just talked with the Superintendent of Documents and he assures me that your name is again entered on the subscription list for the government crop reports.

If you do not receive the issues regularly, please do not hesitate to write again.

Very sincerely yours,

**Letter of Introduction**

This will introduce Mr. Robert Johnson who is a member of our Editorial Staff.

Mr. Johnson is making an exhaustive survey of the large manufacturing plants in our industry, and wishes to study your methods at first hand. His article will not appear until the June issue and advance proofs will be mailed for your approval.

Any courtesy you can show Mr. Johnson will be greatly appreciated.

Very cordially yours,

**57. Writing Orders.**—Modern methods of salesmanship tend to make ordering so easy that it is rarely necessary to write out or dictate an order in the form of a letter. Printed order blanks are usually provided with spaces for all necessary data and information. However, when a letter is necessary be sure that it covers all the details, such as catalog or list number, description of the goods, method of shipment, date of shipment, consignee, destination, and amount of remittance or other enclosure. When requesting that a missing order be duplicated or when reordering do not fail to repeat the order in full. It is far safer to say too much than not enough. Here is a safe model to use:—

**Ordering a Bill of Goods**

Kindly enter our order for the following:—

½ Doz. Keller-Koat Jerseys No. R33 Blue, size 40.
½ Doz. Keller-Koat Slipover No. R16 White, size 42.
2 Doz. Keller-Koat Special No. S55 assorted colors and sizes.

Please ship by American Railway Express at your earliest convenience, charging the cost to our account.

Yours truly,

---

Attention Mr. ———— please.

Dear Sir:—(or Gentlemen:—)

Let me thank you for taking the trouble to inquire about ————. I refer to your letter of ————.

What you want is facts, so I will try to answer the important questions that any business man would ask before entering into a new business transaction. First of all:—

1. WHAT IS OUR PROPOSITION?—(Here follows a brief but interesting description of the goods or an explanation of the service.)

2. WHAT THIS MEANS TO YOU.—(In this paragraph include convincing proof of quality and show how the article or service is adapted to the particular needs of the reader.)

3. WHAT IS THE COST?—(A brief statement of prices, discounts, terms, method of shipment, etc.)

4. WHY YOU SHOULD ORDER NOW.—(Here state any particular or extra reason for buying now.)

5. HOW TO ORDER.—A closing climax or clincher which makes it easy to order and encourages prompt action.)

Hopefully yours,

---

This letter may safely be used as a model in answering almost every conceivable inquiry. It contains all the essential elements of a successful sales letter.

**58. Acknowledging Orders.**—Your own experience will prove the statement that it pays to reply to an order immediately. If you have sent money away in payment for a bill of goods you want to know that it has been received and that it is having prompt attention. If you fail to receive an acknowledgment within a day or two, your opinion of the firm is lowered even though you find out later that the goods were forwarded the very moment your order was received. Promptness, therefore, is the first essential in replying to orders. Some firms use brief form letters of acknowledgment, others, printed cards. Whenever possible, however, it is good business practice to write personal letters and thus take advantage of every opportunity to create good will and stimulate business. For example a Knitting Company writes:—

**Acknowledging An Order**

Dear Mr. Brown:—

We acknowledge with thanks your order of November 18 for three dozen Keller-Koats as listed in our Fall and Holiday Catalog No. 51.

The goods have already been shipped by American Railway Express, as requested.

In handling these goods please bear in mind the fact that our guarantee covers every article and that we welcome opportunities to make good on it.

We appreciate your order and shall be glad to cooperate with you for a successful business.

Very truly yours,

**Shipping Short**

Thank you for your order of November 18 for three dozen Keller-Koats as listed in our Catalog No. 51.

We are making shipment today by American Railway Express as requested, but unfortunately a temporary shortage of stock makes it impossible for us to supply the ½ dozen Jerseys No. R33 for a few days. These will be sent by parcel post special delivery on Saturday, the 25th.

We sincerely hope that this delay will not seriously inconvenience you.

Yours very truly,

**59. Writing Complaints.**—Mistakes occur in every business, from the most efficiently managed trust to the smallest cross roads store. When you send an order any number of things may happen to make it necessary for you to write a complaint. There may be a delay in shipment; you may receive more or less merchandise than you ordered; you may receive a bill of goods that is defective; that has been misrepresented, or that you did not order at all. Frequently you are billed at prices higher than you expected to pay. When mistakes of this kind occur you are often tempted to sit down and write a hot letter of criticism. Don't do it. Your common sense will lead you to make allowances for human errors, and your better judgment will tell you that your claim will receive more consideration if it is written calmly and courteously. Remember, that as a general rule the other fellow has no desire or intention of cheating you, and that he feels worse than you do about the error. Make your complaint within a reasonable time, but before doing so be sure that the mistake is not your own.

**Goods Failed to Arrive**

Please look up our order No. 186 for 3 dozen Keller-Koats.

The main shipment arrived promptly, but the ½ dozen Jerseys No. R33 which you promised to mail on the 25th have not reached us.

As our customer has waited long and patiently for these sweaters, we ask you to duplicate the order and get them here as soon as possible. In the meantime, if the first lot comes in we will notify you.

Your prompt attention to this matter will be appreciated.

**Short Shipment**

Our order No. 186 for 3 dozen Keller-Koats has just reached us.

We regret to inform you that ½ dozen Jerseys No. R33 are missing from the shipment.

Please investigate the matter and see that the remainder of the order is sent us as quickly as possible.

Yours very truly,

**Goods Not as Ordered**

Your shipment of 3 dozen sweaters, our order No. R33 has just arrived.

In checking over the merchandise we find that the 2 dozen Specials No. S55 are all navy blue, size 42, instead of assorted sizes and colors as ordered.

We wish to return these 2 dozen sweaters by express collect and have them replaced with your usual assortment.

We shall be very grateful if you will take care of this matter promptly.

**60. Adjusting Complaints.**—Every complaint, no matter how trivial or how unjust, deserves a courteous reply. The ability to bring a dissatisfied customer back into the buying mood is another one of those rare literary talents. It is the easiest thing in the world to lose the confidence of your trade by ignoring their claims. The customer is not always right, but for all practical purposes it pays to adopt that attitude and to give him the benefit of the doubt, whenever he complains about your merchandise or your service. On the other hand if you can not allow the claim, say so. Do not try to evade the issue.

**Error in Shipping**

Thank you for calling our attention to the shortage on your order No. 186.

Evidently this is one of those annoying errors that will occur in spite of our most painstaking efforts to prevent them.

We are sending six of the No. R33 today by special delivery mail in the hope that they will reach you in time.

We regret the omission and the inconvenience it must have caused you.

Very sincerely yours,

**The Purchaser's Error**

We regret to learn that the sweaters on your order No. 186 were not what you expected.

Your order distinctly states that the Specials No. S55 were to be navy blue, size 42. Your letter of the 25th states that they were to be in assorted sizes and colors.

As this is not an error on our part we suggest that you return the goods by express prepaid, and we will gladly make the exchange.

We surely regret this misunderstanding, and hope that it has not seriously inconvenienced you.

Yours very truly,

**61. Writing Credit Letters.**—As nearly all modern business is done on a credit basis, credit letters are of great importance. These might be divided into four classes, first, those asking for credit, second, those replying to applications for credit, third, letters asking for credit information, and fourth, collection letters. Examples of the first three groups are shown below. For collection letters proper, see page 351.

**Asking for Credit**

Gentlemen:—

Through your Mr. Hansel we have become interested in your line and would like to know a little more about your credit arrangements.

Should we decide to give you our account, will you extend us credit up to $2500.00 monthly?

Our business was established ten years ago and we have shown a substantial increase every year since. Our annual gross sales average over $100,000.00.

As to our reliability and financial standing, we refer you to Dun or Bradstreets, or to any business house or banker in this city.

Yours very truly,

**Extending Credit**

Gentlemen:—

Yours is just the kind of account we are always eager to secure, and you may consider this letter as a formal agreement to allow credit on your purchases up to $2500.00 per month.

In accordance with our usual terms, goods will be shipped f. o. b. Chicago, and all invoices are payable less 2% on the 15th of the month following shipment.

It is our desire to make this new relationship mutually pleasant as well as profitable. You will receive better merchandise at fairer prices and we want you to feel free to ask us for any information, advice, or assistance you may need at any time.

Very gratefully yours,

**Limiting Credit**

Gentlemen:—

Referring to your letter of Jan. 10 we assure you that we are anxious to grant you any line of credit consistent with your financial condition.

However, we have just gone over your latest statement and to be frank with you we fear that you are making a mistake in over-stocking at the present time.

It is not our desire to sell all the goods we can, or get all the money we can from our customers. Neither do we want to injure your trade in any way. We want to co-operate with you for a successful season.

With this idea in mind, we are placing your credit limit at $1500.00 monthly instead of $2500.00. This should prove adequate and at the same time you will avoid the condition which has seriously crippled so many merchants in your line.

We feel sure that you will see the advisability of the change and we will welcome your orders on that basis.

Very sincerely yours,

**Refusing Credit**

Gentlemen:—

We thank you for your letter and offer of business for the new year.

We have just gone over the reports furnished by the Mercantile Agencies, and to be perfectly frank with you, we believe that before adding to your present obligations, you should increase your working capital.

We offer this as a suggestion, and in case you decide to adopt it, we will be very glad to open an account. In the meantime, you can order in a moderate way and keep your business on a cash basis.

We are eager to render every service we can consistently give.

Yours very truly,

**Requesting Credit Information**

We have been referred to you regarding the responsibility and financial standing of Mr. J. J. Greene of 1637 Halsted St., Chicago, Ill., who wishes to open an account with us.

The information requested below will be very much appreciated, and will, of course, be held in strict confidence. We will gladly extend similar courtesies when we can do so.

A stamped return envelope is enclosed for your convenience.

Very truly yours,
BROWN BROTHERS.

How long did you sell him?
What terms did you extend?
What was his highest credit?
How much does he owe?
How much is past due?
Do you consider him a good risk?
Remarks:

**62. Application for a Position.**—Here is a type of personal letter which must not only follow the outward form of a business letter, but must be governed by the principles of the successful sales letter. When you write an application for a position you are in reality selling yourself or your services. Forget yourself. Write not so much about your own interests or your own accomplishments as you do about the needs and desires of the employer. Your problem is to arouse his interest and desire; you must persuade him that your qualifications will be an asset to him in his business; you must prove your ability to his entire satisfacton; and as a final climax or clincher you should make it easy for him to buy by your readiness to come for an interview at his convenience. The question of salary can best be left to the per-

sonal interview. Notice the way these points are brought out in the following letters:

**In Answer to an Advertisement**

Dear Sir:

Your advertisement shows that you want someone who knows how to write good letters. He must be able to:—

1. develop new business,
2. keep old customers satisfied,
3. adjust complaints in a friendly way,
4. collect your accounts when due.

My experience includes six years of correspondence work in the advertising and sales departments of the National Bag Company, to whom I respectfully refer you. My age is 25. My education consists of a High School Course and two years home training with the Alexander Hamilton Institute.

Let me prove to your satisfaction that I can meet your requirements. Call Kinzie 3478 and I shall be glad to come at any time you suggest.

Yours truly,

## HOW TO REDUCE ADVERTISING COSTS

1. **A Real Problem.**—Here is a problem which confronts every man in business. Every year unbelievable sums are tossed haphazard into the insatiable maw of advertising, without any real plan, without the slightest idea of the expected results, without any definite checkup of the actual return in dollars and cents. One advertiser has adopted the rule of using a full page in the leading newspapers in his territory, both daily and Sunday. Another uses only such space as he will never be forced to decrease. A third advertises only when business is slack. And still another follows the simple rule of making the space suit the copy. In this chapter we shall endeavor to point out some of the common mistakes in advertising, and to outline a plan of action which will reduce these errors to a minimum.

2. **What is Advertising?**—Webster defines advertising as the science of turning the attention of others to a certain thing. In other words, advertising is telling the other fel-

low what you have to offer. This is not confined to the printed page of a newspaper or magazine, nor to catalogs, folders, booklets or circular letters. There are many other ways in which a firm's products are advertised. An effective window display, a sign board, or a personal call by a salesman may be the best available means of bringing the goods to the attention of the public. Besides all these recognized methods, however, there is always present a certain amount of indirect advertising without which any campaign will fail. For example, the firm which makes a practice of giving real service and real satisfaction earns a reputation for fair dealing which is passed around by word of mouth. Advertising thus founded on the rock of public confidence is advertising of the very highest type. It is the cheapest and best in the long run.

**3. The Man Who Does Not Believe in Advertising.**—You have all met him, the man who thinks advertising does not pay. There is one in our town. His name is Jones. He has run a men's furnishing store here for five years, or rather the store has run him, because today he is a bankrupt. His argument was that everybody in town knew him and knew what he had in the store. "They've got to wear clothes, and when they need anything, they'll come in," he used to say. Smith, a competitor, moved in next door about a year ago. He ran something special every week, and told people about it in the local papers and in special form letters. His windows were a revelation to the community. And on top of it all, he soon established a reputation for having good goods at good prices. As a result Smith's business shows a big increase every month, while Jones has made an assignment for the benefit of creditors.

**4. Does Advertising Pay?**—That question can best be answered by an analysis of the habits of this man Jones who openly declared his lack of confidence in modern advertising methods. "Big Ben" wakened him every morning. He washed with "Pears" soap and shaved with a "Gillette." He wore "B. V. D's," "Not-a-Seam" Hose, "Paris" garters, "Cluett" shirts, "Arrow" collars, "Cheney" cravats, "Society Brand" clothes, "Douglas" shoes, and "Knox" hats. For breakfast he ate "Sunkist" fruit, "Kellogg's" breakfast food, "Blue Valley" creamery butter, "Premium" bacon, and drank a cup of "Yuban" coffee. Before he ever started down to the store in the morning he had made use of not less than

seventeen different nationally advertised articles. You will find a similar condition in the life of every individual who is foolish enough to doubt the value of advertising.

**5. The Value of Expert Advice.**—Probably the greatest mistake that any business man can make is to plunge recklessly into an advertising campaign without a thorough knowledge of the fundamental principles of advertising. Such knowledge is rarely the possession of the average business man. In large concerns an expert is a necessary part of the organization, whereas the small merchant usually considers the publicity work as his own duty. But the real specialist in the form of the advertising agency is available to one and all. Here are gathered together a group of advertising experts with a broad knowledge of the business itself, with an intimate acquaintance with the pulling power of various mediums and with a fund of invaluable experience. Just as the doctor knows medicine and the lawyer knows law, so it is the business of the advertising man to know advertising.

**6. The Cost of Expert Advice.**—Contrary to the ordinary belief the cost of agency help is not exhorbitant. Naturally a reasonable fee is charged for the writing of circular letters, folders, booklets and other literature to be used in a mail campaign, but this fee must be in proportion to the service rendered. On the other hand the advertiser is asked nothing for the preparation of copy to be used in newspaper or magazine advertising. This expense is borne by the papers and magazines themselves and is paid in the form of a commission on the price of the space used. Consequently the inexperienced publicity seeker who does not avail himself of the best advice and assistance is making a grave mistake.

**7. An Advertising Plan.**—Before starting out to spend any money for advertising, a business man should analyze his problem. He should ask himself these five questions:—

a. What does the buyer want?
b. How does my product fit that want?
c. What tone should dominate my advertising?
d. What are my principal appeals for trade?
e. What is the best method of advertising to adopt?

In attempting to answer these questions the advertiser must realize that there are four principal classes of buyers, first, those who are neither familiar with nor interested in the product; second, those who are not familiar with the product

but will recognize a need for it; third, those who are known users of similar products, and fourth, those who use similar products but are accustomed to buy them in a different way. Let us consider each classification:

**8. Buyers in Class I.**—If you want to sell to a man who knows nothing about you and has no immediate use for your product, the problem is a difficult one. He thinks he is getting along very nicely without it. You must make him feel that he does want your product. You must utilize all the persuasive powers at your command. Show him the possibility of more profit thru the use of the article. Make him feel the loss of being without it.

**9. Buyers in Class II.**—Here we find a buyer who is unfamiliar with the article you offer for sale. At the same time he is quick to recognize its value when it is brought to his attention. "Just the thing I have always wanted," he exclaims, and his order is almost a foregone conclusion. Your task is merely one of explanation and description. Once you have made him see the product in relation to his own needs, he is ready to act.

**10. Buyers in Class III.**—Suppose that you are selling an article that everybody buys, such as food or clothing. Your task here is primarily one of publicity. You must make your brand better known that that of the other firms who are selling the same kind of goods at the same prices. You cannot appeal to the buyer's desire for financial gain. Instead you should emphasize the quality of your own article and its superiority over the offerings of your rivals. The promise of service and satisfaction should be the dominant note in your advertising.

**11. Buyers in Class IV.**—When you ask a man to change his method of buying food or clothing or anything else that he is accustomed to buying, you must give him a logical reason for making the change. The saving in dollars and cents is the real reason why thousands of people stopped buying supplies from the local retailers and sent their orders to the large mail order houses or direct to the factory. If your plan of merchandising is different or unusual in any way, you cannot expect to change the buyer's habits unless your advertisements convince him that it will be worth his while to make the change.

**12. Planning the Campaign.**—Analyze your proposition, group your prospects according to the above classification,

and plan your campaign accordingly. You can then turn to your own advantage the points on which the prospect is already sold, and overcome one by one the objections and the difficulties which might prevent the sale.

**13. Methods of Distribution.**—The question of distribution must always be considered in connection with the advertising problems. There are really just five methods open to the manufacturer, namely:

a. Direct sale by mail from factory to consumer.
b. Canvassers selling to the consumer.
c. Manufacturer's agents selling to jobber or retailer.
d. Wholesalers selling to retailers.
e. Direct sale to the retailer.

The advertising must conform to the particular method selected.

**14. The Fundamentals of Advertising.**—What are the fundamental principles which govern a successful advertisement? Authorities have gone into the psychology of the sale from every conceivable angle. They have evolved countless theories, formulae and plans. But after all is said and done there are just four essentials to a successful advertisement:

It must be seen.
It must be read.
It must be understood.
It must produce action.

If it is not seen, read, or understood it cannot hope to accomplish its purpose. If it does not ultimately produce that action which is its real purpose, it represents wasted effort.

**15. Seeing the Advertisement.**—The first purpose of the advertisement, then, is to be seen—to attract attention. The choice of the medium is perhaps the most important consideration in bringing the advertisement to the attention of the largest possible number of people. Then come the words themselves, the arrangement of the copy, the size and style of type, the color and the spacing, in the order of their importance.

**16. Modern Advertisers** have discovered certain interesting facts about the art of attracting attention. They know, in the first place, that the impression created must be favorable to the goods advertised. Common sense warns of the

danger in going too far off the subject in order to get attention. Secondly, they know that fundamentally all people act in the same way under similar circumstances. And finally, they have given us a list of the various elements that can always be relied upon to attract attention in an advertisement. Briefly, these are

a. **Motion,** suggested by the artist in the illustration or by some unusual arrangement of type is one of the best means of attracting attention.
b. **Headlines,** set in large type, attract the eye of the reader.
c. **Contrast,** between the old and the new, the good and the bad, or the desirable and the undesirable is a device which turns the reader's attention in the right direction.
d. **Arrows** to point out in the text or illustration some distinguishing feature, or some decided advantage, are used to a large extent in advertising machines.
e. **Favorable Position** is very important in getting the copy seen. Experienced newspaper and magazine advertisers usually select the top of the column on the right hand side as near to the reading matter as possible. The back page of a magazine is the most desirable, with the inside front and inside back covers coming next.
f. **Pictures** tell their story where the printed words might be entirely overlooked. As attention getters they are invaluable.
g. **Color** is often used to attract attention. It can also be made use of to picture the product as it actually appears and thus serve as an identification mark at the time of purchase.
h. **Curiosity** is a wonderful force in advertising. To see the words "Who is a Frog?" or similar meaningless phrases staring at you from newspapers and bill boards at once excites your interest. Anything that is novel or out of the ordinary serves the same purpose.

**17. Reading the Advertisement.**—It is easy enough to get attention; the difficulty comes when you try to change that attention into personal interest. A cry for help will attract

the attention of everyone within hearing distance, but unless there is some real danger, the attention is immediately lost. Thus, the second step in successful advertising is to change attention into interest.

**18. Mechanical Makeup.**—If interest is to be held thruout the advertisement, it is very important that the type be clear, legible, and pleasing to the eye. People simply will not read anything that is tiring. In the same way much of your effect will be lost if the selection and arrangement of illustrations and type does not harmonize with the written message. Different sizes and styles of type are made use of to emphasize the important points. Short paragraphs, short sentences and simple words also help to sustian the reader's interest.

**19. The Human Interest Story** is universally used to arouse interest. It deals with fundamentals. It affects all classes. The appeal may be to pride, fear, comfort, style, health, appetite, or any one of a thousand other things in which the reader is interesed. Man is selfish, and if you can show him how to solve some difficult problem that he meets in his business or home life, if you picture the article in terms of his own needs and desires, you have won his undivided interest. If you talk about your own aims and ambitions, you will lose it.

**20. Mental Images.**—A successful advertisement will call up in the reader's mind a series of pleasing mental pictures, closely connected, and following each other in logical order. Involuntary interest is sustained to the very end. The reader is led step by step to do the very thing the writer intended him to do. An advertisement that does not lead to some definite conclusion, cannot be expected to bring about decision and action.

**21. Rules for Arousing Interest.**—If you want your advertisement read, therefore, remember first, that you must make it pleasing to the eye and easily read; second, that you must forget yourself and appeal to the interests of the people who will see the advertisement, and finally that you must reach some logical conclusion.

**22. Understanding the Advertisement.**—You have attracted attention, you have won interest; now to explain your proposition. Of what use is a clever heading, an attractive illustration, or an interesting lay-out if the reader cannot figure what it's all about. As the author of the advertise-

ment your third problem, therefore, is to make the reader understand exactly what you are advertising for sale, how it affects him, and what you want him to do about it.

23. **Unmistakeable Clearness** is, therefore, absolutely essential. It saves time, energy and space, each one of which means a saving of money. It stimulates decision and action. Sentences should be concise, and to the point. Each paragraph should have some connection with the one before it. Thoughts should be presented clearly and logically.

24. **Description and Explanations.**—Your advertisement must be so worded that the reader will get a vivid mental picture of the article or service offered. This sounds easy, but as a matter of fact, there is nothing more difficult to write than interesting and effective description. The picture must be complete in your own mind before it can be successfully conveyed to others. Non-essentials must be eliminated, and emphasis placed on those details which show the article in relation to the reader's interests.

25.—**Proof as an Aid to Understanding.**—The real meaning of an advertisement can sometimes be explained by telling what the article or service has done for others. In other words, the reader often demands proof not only of the value of the thing advertised, but of its usefulness. You must prove your words either by the sincerity of your offer, by the breadth of your guarantee, or by first hand convincing testimonials from satisfied purchasers.

26. **The Story** is a simple yet effective means of making the reader see the light. This may take the form of the anecdote, a single episode, a complete narrative, a dialogue, news item, or historical incident. Public speakers know the value of the story in driving home an argument, and make use of it on every occasion. In advertising, as in public speaking, the great danger lies in the tendency to pay too much attention to the story and to overlook its direct application.

27. **Reason Why Copy.**—Fundamentally, all advertising is educational. If it is educational in fact as well as in theory, that is, if it tells how, when, where, and why, it is readily understood. In all your efforts toward making your advertisements understood, therefore, strive for simplicity, interesting and accurate description, convincing proof, apt illustration, and the education of the reader.

**28. Action.**—The mere fact that your advertisement is placed where it will be seen by millions of people does not mean that it will accomplish its purpose. This brings us to the fourth fundamental—action. Hundreds of thousands may read and understand every word of it, but if they fail to act, your efforts have been wasted. Formerly many advertisers believed in the influence of an advertisement irrespective of its direct results. Today such publicity is far too expensive, and experts agree that it is the direct tangible results that count.

**29. Methods of Producing Action.**—A successful advertisement will pluck the reader by the arm and induce him to ask for a certain brand, to send in an order direct, to ask for further information, or otherwise decide to part with some of his hard earned money. This decision is brought about by one of two processes, reasoning or suggestion, or by a combination of the two.

**30. Reasoning or Suggestion.**—Although cold, hard logic is very useful in advertising, experience teaches us that action is produced far more frequently by suggestion. In other words, a man who would ignore the most logical arguments, might be led to act thru gentle suggestion. For example, let us suppose that you are selling an automobile. If you choose the process of reasoning you will talk about the value, strength, simplicity, speed and economy of the machine. You will emphasize some important point of superiority. You will forestall all possible objections. You will strive to bring about favorable decision and action by the very force and sincerity of your arguments. If, however, you adopt the other method you would probably ignore many of the economic considerations, and dwell on some of the more appealing advantages. Your copy would suggest the pride, pleasure and prestige of ownership, the health and happiness of outdoor life, or the satisfaction of being able to outdistance your neighbor. An apt illustration and a few words of suggestion will frequently bring greater results than a whole page of logical arguments. Usually, however, a combination of both processes is desirable.

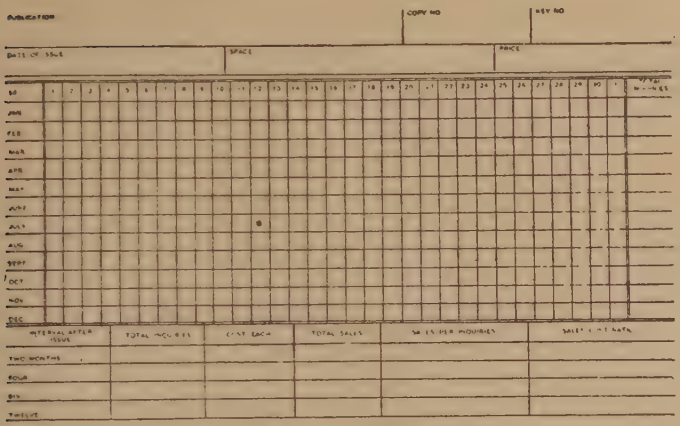
**31. Confidence.**—People buy advertised articles because they feel confident that such articles would not be so strongly advertised unless they possessed real merit. Confidence, therefore, is the basis of all action. If you have something new and unheard of, considerable money must be spent in

advertising in order to establish the confidence of the public. The newer the product, the greater the need of advertising becomes. Strong testimonials from important people will help. Many advertisers print a list of prominent users, some rely on the strength of their money back guarantee, while others inspire the same feeling of confidence by their simple sincerity. A statement such as "Fifty years in business" or a picture of a large manufacturing plant convinces the reader that there is something worth while, something tangible, back of the advertisement. Without that feeling, no matter how inspired, the campaign will fail.

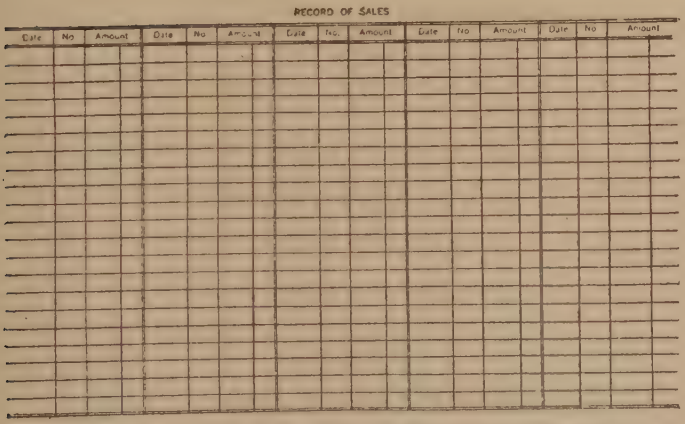
**32. Inducement.**—Every advertisement should contain some definite reason for immediate action. Your own experience is proof of this. How often you have seen a description of something you wanted, and determined to send for it at some future date, only to forget all about it the next day. As an advertiser you must remember this very human trait. Be sure that all your advertisements include something to stimulate action. This may take the form of a "special limited time offer," "an introductory offer, good for 30 days only," "a special price," "a free offer," or any one of a hundred others, in which personal gain is the real inducement.

**33. Making it Easy to Order.**—The more you can reduce the number and the difficulty of the things you want the reader to do, the better your chances are of having them done. Make your instructions or suggestions simple, definite, and easy to carry out. Avoid the necessity of letter writing. "Call Main 700 and let us deliver one today" induces action by the very simplicity of the suggestion. "Don't bother to write a letter. Just indicate your size on the coupon below, put it in an envelope and mail today" sounds so easy that action follows quite naturally. This mechanical ease of response is after all the real factor in producing action.

**34. Display vs. Classified Advertising.**—The display advertisement is like a salesman. It tries to create a desire where none existed before. On the other hand the want ad is merely an order taker. **The sale is made before the classified column is ever consulted.** In planning and writing advertisements many business men make the mistake of ignoring this essential difference. They use display space when the classified would bring the best results. And even in the




RECORD OF COSTS AND RESULTS




CONVENIENT FORMS FOR CHECKING YOUR ADVERTISING RETURNS

use of the want ad columns the tendency is usually to use general statements, thus failing to give sufficient information to complete the sale. In classified advertising the aim should be to keep out the curiosity seeker, and limit your replies to actual prospects. Suppose for example you have a used car for sale. Thousand of ads appear every day worded just like this one:—

> BUICK ROADSTER, latest model, looks like new; must sell; Bargain.—Oscar Lamp, 1636 W. Madison.

No price. No specific information. Just a jumble of meaningless words. How much better it would be to give the facts, thus:—

> BUICK ROADSTER 6A, driven 2500 miles; good tires; $500 cash. Oscar Lamp, 1636 W. Madison.

This advertisement is not a bit longer than the other, but it is certain that the people who reply have $500.00 that they would be willing to pay for such a car. One reply to this ad is worth a dozen of the others.

**35. In Conclusion.**—We have now discussed briefly the underlying principles of successful advertising, and pointed out some of the more common mistakes. In bringing this chapter to a close it might be well to call attention to the unlimited possibilities in this field. Seemingly impossible feats are daily being accomplished thru the right kind of advertising. As M. Coue says, "Ca passe, it is passing," all your troubles disappear if you will face them. One merchant wanted to get away from the cold inhumanity of the monthly statements of his customer's accounts. Every month he printed a small advertisement right on the statement and found to his delight that it not only improved his collections, but increased his sales. The supreme example of getting the most for your money is found in the automobile industry. Every year an immense exhibition is staged in every large city. Its one object is to sell automobiles. And yet so subtle is the propaganda that hundreds of thousands actually spend their hard earned cash to gain admission—just for the privilege of seeing the display and giving their orders to the various manufacturers. Advertising has done this for the automobile business. Are you using it to the best advantage in yours?

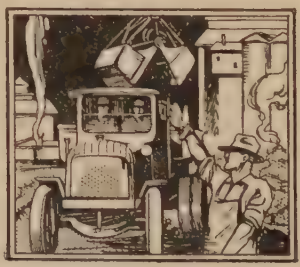
SECTION 4

# Reference Department

Weights and Measures—Short Methods of Arithmetic — Interest Tables for Daily Use — What a Business Man Ought to Know About Printing—Useful Rules and Tables for Builders—Efficiency on the Farm—Tables for Ready Reference—Rules—Statistics — Facts —Formulae

## EXPLANATION

HOW much—wie viel—combien—hvor meget—quanto? These are probably the most important words a stranger must know in a foreign land. He must be able to ask this question and understand the reply. How much does it cost? How much do I get for my money? How much land has he? How much in that pile? How much does this bin hold? It took mankind countless generations to evolve the simplest forms of counting, weighing, and figuring. The perfecting and popularizing of standards of measurement still goes on.



## WEIGHTS AND MEASURES

1. **How Obtained.**—**Weight** is the measure of the force of gravity, or the earth's attraction for a body or substance, and varies with the mass of the body, or the quantity of matter that it contains. The weight of an article, therefore, can be obtained by comparing its measure of attraction to the earth with that of a fixed standard unit, as for example, an ounce or a pound. This process of comparison is generally accomplished by a mechanical device known as a scale or a balance.

**A Measure** is a standard unit established by law or custom, by which quantity is measured or estimated. Thus, length is ascertained by applying the foot or yard measure; capacity by the use of the quart, the gallon, or the bushel; time by the use of the second, minute or hour.

2. **Fundamental Quantities and Units.**—There are three fundamentally different kinds of quantities that can be measured, viz., length, mass, and time; all other measurements may be reduced to these three. The basis of all measurements is some standard primary unit from which all other units are derived. Accordingly, the yard, the pound, and the second are the respective accepted fundamental units of length, weight, and time, in our common system of measurement.

3. **Two Systems.**—There are two systems of units of weight and measurement in general use, the **English** and the **Metric** system. While the latter system has been legalized in the United States, the former is the one more commonly in use here.

4. **Units of Length.**—The **yard** which is the standard unit of length for the United States is defined as the distance between the 27th and 63rd divisions of a brass bar deposited in the Bureau of Weights and Measures at Washington, D. C., at a temperature of 16 2/3 C. One-third of this distance constitutes the **foot,** and one-thirty-sixth the **inch.** Nearly all civilized nations have at some time employed a unit of length the name of which bore the same significance as does **foot** in English. There can scarcely be any doubt therefore, that in each Country this unit has been derived from the length of the human foot. It is probable that in England after the yard, a unit which is supposed to have represented the length of the arm of King Henry I, became established as a standard, the foot was arbitrarily chosen as one-third of this standard yard. In view of such an origin it is quite evident that no agreement existed among the units in use in different countries and even now we find such conventional measures as the **Barleycorn** used by shoemakers; the **Palm** and the **Hand** used to measure the height of horses; the **Span,** the **Fathom,** the **Cable Length,** and the **Knot** used by sailors to measure depths and distances at sea; and the **Pace** for distances in walking.

5. **Units of Weight.**—The standard unit of weight is the **Troy Pound** adopted by the Mint at Philadelphia and elsewhere, and contains 5760 grains. It is equal to the weight of 22.794377 cubic inches of distilled water and is less than the pound avoirdupois. The unit of weight for all ordinary purposes adopted in this country and in England is the **Avoirdupois Pound** which is equivalent to 7000 grains. It is the weight of 27.7015 cubic inches of distilled water.

6. **Units of Time.**—Time is a part of duration and the **second** is taken among all civilized nations as the standard unit of time. It is the 1/86400 part of the time from noon to noon. A **true year** is the time of one revolution of the earth around the sun, which is 365 days, 5 hours, 48 minutes and 46.75 seconds. Figuring 365 days as a **common year,** the time lost in the calendar in 4 years will lack only

44 minutes, 55.4 seconds of a day; hence, we add 1 day to February every fourth year, calling it Leap Year which contains 366 days.

In 100 years this difference of 44 minutes, 55.4 seconds amounts to 18 hours, 43 minutes, 5 seconds; hence, at the end of 100 years we omit to add 1 day, thus losing 5 hours, 12 minutes, 55 seconds, which is corrected by adding 1 day at the end of 400 years. Therefore, every year devisible by 4 (except Century years) and every Century year divisible by 400 is Leap Year.

7. **Derived Units.**—From the measure length are also obtained the measurements of Area and Volume; for an area is expressed as the product of two lengths, and a volume as the product of three lengths. For these reasons the units of area and volume are looked upon as **derived units,** depending on one fundamental unit, the unit of length.

8. **Tables.**—To facilitate calculations, tables of all the important measures and weights have been arranged in a systematic and orderly way, and printed on the following pages for your help and guidance.

## Tables of Weights and Measures

### Troy Weight

| Table | Equivalents | pwt. | gr. |
|---|---|---|---|
| 24 Grains(gr.)=1 Pennyweight(pwt.) | oz. 1= | 24 | |
| 20 Pennyweights=1 Ounce (oz.) | ℔. 1= | 20= | 480 |
| 12 Ounces =1 Pound (lb.) | 1=12= | 240= | 5760 |

Gold, silver and jewels are weighed by Troy Weight.

| Diamond Weight | Assayers' Weight |
|---|---|
| 16 Parts =1 Carat Grain | 1 Carat =10 Pennyweight |
| 4 Carat gr.=1 Carat | 1 Carat gr.=60 Troy gr. |
| 1 Carat =3 1/6 Troy gr. nearly | 24 Carats =1 Troy lb. |

In weighing diamonds and gems, the unit generally employed is the Carat, which is about 3.2 Troy grains. The term **Carat** is also used to express the fineness of gold.

### Apothecaries' Weight

| Table | Equivalents | ℈ | gr. |
|---|---|---|---|
| 20 Grains (gr. xx)=1 Scruple (℈) | ʒ 1= | 20 | |
| 3 Scruples (℈iij)=1 Dram (ʒ) | ℥ 1= | 3= | 60 |
| 8 Drams (ʒviij)=1 Ounce (℥) | ℔. 1= | 8= | 24= 480 |
| 12 Ounces (℥xii)=1 Pound (℔.) | 1=12= | 96= | 288=5760 |

Apothecaries weight is used in prescribing and in compounding dry medicines. The grain, ounce, and pound are the same as those of the Troy weight. But medicines are usually bought and sold in quantities by Avoirdupois weight.

### Avoirdupois Weight

| Table | | Equivalents | | |
|---|---|---|---|---|
| | | | oz. | dr. |
| 16 Drams (dr.) | =1 Ounce (oz.) | lb. | 1= | 16 |
| 16 Ounces | =1 Pound (lb.) | Qr. 1= | 16= | 256 |
| 25 Pounds | =1 Quarter (qr.) | Cwt. 1= | 25= | 400= 6400 |
| 4 quarters | =1 Hundredweight (cwt.) | T. 1= | 4= | 100= 1600= 25600 |
| 20 cwt. | =1 Ton (T) | 1=20= | 80= | 2000=32000=512000 |

Avoirdupois weight is used for all the ordinary purposes of weighing.

### Coal, Iron, and U. S. Customs Weight

In weighing some of the coarser articles, as iron and coal at the mines, and goods on which duties are paid at the U. S. Custom Houses, the Long ton of 2240 pounds is still used.

| Table | | Equivalents | | |
|---|---|---|---|---|
| | | | qr. | lb. |
| 28 Pounds | =1 quarter (qr.) | cwt. | 1= | 28 |
| 4 Quarters | =1 Hundredweight (cwt.) | L. T. | 1= | 4= 112 |
| 20 Hundredweight | =1 Long Ton (L. T.) | | 1=20= | 80=2240 |

### Comparison of Troy and Avoirdupois Weights

| Troy | | Avoirdupois | Troy | Avoirdupois |
|---|---|---|---|---|
| 18 pwt. 5½ gr. | =1 ounce= | 480 grains = | 437½ grains | |
| 14 oz. 11 pwt. 16 gr. | =1 pound=5760 grains= | 7000 grains | | |
| | 175 ounces = | 192 ounces | | |
| | 1 pound = | .822857 pound | | |
| | 1.215278 pound = | 1 pound | | |
| | 175 pound = | 144 pound | | |

### Linear or Long Measure

| Table | | Equivalents | | | |
|---|---|---|---|---|---|
| | | | | ft. | in. |
| 12 inches (in.) | =1 foot (ft.) | | | | |
| 3 feet | =1 yard (yd.) | | Yd. | 1 = | 12 |
| 5½ yds. or 16½ ft. | =1 rod (rd.) | Rd. | 1 = | 3 = | 36 |
| 40 rods | =1 furlong (fur) | Fur. 1= | 5½= | 16½= | 198 |
| 8 furloughs or 320 rods | =1 mile (mi.) | Mi. 1= | 40= | 220 = 660 = | 7920 |
| | | 1 = | 8= | 320=1760 = 5280 = | 63360 |

This measure is used to measure distances, lengths, breadths, heights, depths, etc.

### Cloth Measure

| Table | | Equivalents | | |
|---|---|---|---|---|
| | | | na. | in. |
| 2¼ inches | =1 Nail (Na.) | qr. | 1= | 2¼ |
| 4 nails | =1 Quarter (qr.) | yd. | 1= | 4= 9 |
| 3 quarters | =1 Ell Flemisti | E. Fl. 1 | =4= | 16=36 |
| 4 quarters | =1 Yard | E. Eng. 1 | = ¾= | 3=12=27 |
| 5 quarters | =1 Ell English | E. F. 1 | =1 2/3= | 1¼=5=20=45 |
| 6 quarters | =1 Ell French | 1=1 1/5= | 2 | =1½=6=24=54 |

Cloth Measure is used for measuring all kinds of cloth, ribbons, and other things sold by the yard.

### Miscellaneous Lengths

| | | | |
|---|---|---|---|
| 3 Barleycorns | =1 inch | 3 inches | =1 palm |
| 4 inches | =1 hand | 9 inches | =1 span |
| 18 inches | =1 common cubit | 21.88 inches | =1 sacred cubit |
| 2½ feet | =1 common pace | 3 feet | =1 military pace |

### Surveyors' Linear Measure

| Table | | Equivalents | | | | | |
|---|---|---|---|---|---|---|---|
| 7.92 Inches | =1 Link (l.) | | | | | l. | in. |
| 25 Links | =1 Rod (rd.) | | | rd. | ft. | 1= | 7.92 |
| 4 Rods or 66 ft. | =1 Chain (ch.) | | ch. | 1= | 16½= | 25= | 198 |
| 10 Chains | =1 Furlong (fur.) | fur. | 1= | 4= | 66 = | 100= | 792 |
| 8 Furlongs | =1 Mile (mi.) | mi. | 1=10= | 40= | 660 | =1000= | 7920 |
| 100 Feet | =1 Engineer's Chain. | | 1=8=80= | 320= | 5280 | =8000= | 63360 |

Surveyors use this measure in measuring roads and boundaries of land. A Gunter's Chain is the unit of measure consisting of 100 links, and is 4 rods or 66 feet long.

### Nautical and Geographical Measure

| | | |
|---|---|---|
| 9 | Inches | =1 Span (sp.) |
| 9 | Spans or 6 ft. | =1 Fathom (fath.) U. S. or 6.08 ft=1 fath. British. |
| 120 | Fathoms | =1 Cable Length (C. L.) or 101.4 Fath.=1 C. L. British. |
| 7½ | C. Lengths | =1 Common or Statute Mile or 8.44 C. L. U. S.=1 Knot. |
| 1.15 1/5 | Sta. Mi. | =1 Geographic or Nautical Mi. or Knot. (6080 ft.) |
| 3 | Statute Miles U.S. | =1 League, Sometimes, 3 Naut. Miles U. S. |
| 60 | Geographic or | =1 Degree Longitude on the Equator. |
| 69.16 | Statute Miles | |
| 360 | Degrees | =1 Circumference of the Earth. |

This measure is used by seamen in measuring distances, the depth of the sea, etc. and for Geographical and Astronomical calculations,

### Square or Surface Measure

| Table | | |
|---|---|---|
| 144 | Sq. Inches | =1 Sq. Foot (sq. ft.) |
| 9 | Sq. Feet | =1 Sq. Yard (sq. yd.) |
| 30¼ | Sq. Yards | =1 Sq. Rod or Perch (P.) |
| 40 | Sq. Rods | =1 Rood (R.) |
| 4 | Roods | =1 Acre (A.) |
| 640 | Acres | =1 Sq. Mile (sq. Mi.) |

### Equivalents

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | sq. ft. | | sq. in. |
| | | | | | sq. yd. | | 1 | = | 144 |
| | | | | P. | 1 | = | 9 | = | 1296 |
| | | | R. | 1= | 30¼ | = | 272¼ | = | 39204 |
| | | A. | 1= | 40= | 1210 | = | 10890 | = | 1568160 |
| | sq. mi. | 1= | 4= | 160= | 4810 | = | 43560 | = | 6272640 |
| | 1= | 640= | 2560= | 102400= | 3097600 | = | 27878400 | = | 4014489600 |

A square inch is a square, each side of which is one inch in length. Roofing and flooring are usually estimated by the square which is 100 square feet.

### Surveyors' Square Measure

| Table | | |
|---|---|---|
| 62.73 | Sq. Inches | =1 Sq. Link (sq. l.) |
| 625 | Sq. Links | =1 Sq. Rod (sq. r.) |
| 16 | Sq. Rods | =1 Sq. Chain (sq. ch.) |
| 10 | Sq. Chains | =1 Acre (A.) |
| 640 | Acres | =1 Section (S.) |
| 36 | Sections | =1 Township (Tp.) |

### Equivalents

| | | | | | sq. in. |
|---|---|---|---|---|---|
| | | | | sq. l = | 62.73 |
| | | | sq. rd = | 1 = 625 = | 39204 |
| | | sq. ch. = | 1 = 16 = | 10000 = | 627264 |
| | A = | 1 = | 10 = 160 = | 100000 = | 6272640 |
| | S = | 1 = | 640 = 6400 = | 102400 = 64000000 = | 4014080000 |
| Tp. = | 1 = | 640 = | 6400 = 102400 = | 64000000 = | 4014080000 |

1=36=23010=230400=3686400=2304000000=144506880000

This measure is used by surveyors in computing the area of land.

### Cubic or Solid Measure

| Table | | Equivalents |
|---|---|---|
| 1728 Cubic Inches | =1 Cubic Foot (cu. ft.) | 1 U.S. Bu. =1.2445 Cu.Ft. |
| 27 Cubic Feet | =1 Cubic Yard (Cu yd.) | 1 Brit. Bu. =1.2837 Cu.Ft. |
| 16 Cubic Feet | =1 Cord Foot (C. ft). | 1 Brit. Gal. = .1605 Cu.Ft. |
| 8 Cord feet or | | 1 U.S Gal. = .13368 Cu.Ft. |
| 128 Cubic Feet | =1 Cord of wood or stone (C) | |

This measure is used for computing the capacity or contents of solids. A cord of wood is a pile four feet wide, four feet high, and 8 feet long.

### Shipping Tonnage

40 Cubic Feet of Round or )=1 U.S. Shipping Ton=32.143 U.S.
50 Cubic Feet of Hewn Timber ) Bushels.
42 Cubic Feet=1 British Shipping Ton=33.75 U. S. Bushels
100 Cubic Feet=1 Register Ton (assumed for measurement of internal capacity of a vessel.)
45.8 Cubic Feet=1 Ton Lackawana Coal, or 48.89 lb. per cu. ft.
40.5 Cubic Feet=1 Ton Lehigh Coal, or 55.32 lb. per cu. ft.
42 Cubic Feet=1 Ton Average hard coal.
46 Cubic Feet=1 Ton Soft Coal.
88 Cubic Feet=1 Ton Coke.

A ton of round timber, when square, is supposed to produce 40 cubic feet; hence, one-fifth is lost by squaring.

### Dry Measure

| Table | | Equivalents | | | |
|---|---|---|---|---|---|
| 2 Pints (pt.) | =1 Quart (qt.) | | | qt. = | pt. 2 |
| 8 Quarts | =1 Peck (pk.) | | pk. = | 1 = | 2 |
| 4 Pecks | =1 Bushel (bu.) | bu. = | 1 = | 8 = | 16 |
| 36 Bushels | =1 Chaldron (ch.) | ch. = | 1 = | 4 = 32 = | 64 |
| | | 1=36=144=1152=2304 | | | |

1 Heaped Bushel=1¼ Struck Bushel.

Dry Measure is used in measuring all dry articles such as grain, fruit etc. The Standard Unit is the bushel of 2150.42 Cubic Inches.

### Liquid Measure

| Table | | Equivalents | | | | |
|---|---|---|---|---|---|---|
| 4 Gills (gi.) | =1 Pint (pt.) | | | | | pt. gi |
| 2 Pints | =1 Quart (qt.) | | | | qt. = | 1 = 4 |
| 4 Quarts | =1 Gallon (gal.) | | | gal. = | 1 = | 2 = 8 |
| 31½ Gallons | =1 Barrel (bbl.) | | bbl. = | 1 = | 4 = | 8 = 32 |
| 2 Barrels | =1 Hogshead (hhd.) | | hhd. = | 1 = 32½ = | 126 = | 252 = 1008 |
| 2 Hogshead | =1 Pipe (pi.) | | pi. = | 1=2= 63 = | 252 = | 504 = 2016 |
| 2 Pipes | =1 Tun (tun) | | tun. = | 1=2=4=126 = | 504 = | 1008 = 4032 |
| | | | | 1=2=4=8=252 = | 1008 = | 2016 = 8064 |

Liquid Measure is used for measuring all liquids. The standard unit, or gallon of Liquid Measure in the United States contains 231 Cubic inches. Barrels and hogsheads are chiefly used for estimating the capacity of cisterns, reservoirs, etc. They are not fixed measures, but vary when used for commercial purposes.

### Apothecaries' Fluid Measure

| Table | | | Equivalents | | | |
|---|---|---|---|---|---|---|
| | | | | ℥ | ʒ | ℳ |
| 60 Minims (m) | =1 Fluidrachm | (ʒ) | | | | |
| 8 Fludirachms | =1 Fluidounce | (℥) | | ℥ | 1= | 60 |
| 16 Fluidounces | =1 Pint | (℗) | ℗ | 1= | 8= | 480 |
| 8 Pints | =1 Gallon | (Cong) | Cong. | 1= | 16= | 128= 7680 |
| | | | | 1= | 8= | 128=1024=61440 |

1 Minim = Drop Water
½ Fluidounce = 1 Tablespoon
1 Drachm = 1 Teaspoonful
1½ Fluidounces = 1 Wineglass
4 Fluidiunces = 1 Teacup (approx)

Apothecaries' Fluid Measures are used by physicians in prescribing, and apothecaries in compounding liquid medicine.

(Cong.) stands for the Latin Congins, a gallon; and O for Octarius, one-eighth, a pint being one-eighth of a gallon.

A common teaspoon holds about one fluidrachm.

The symbols precede the numbers to which they refer.

### Time Measure

| Table | | Equivalents | | | |
|---|---|---|---|---|---|
| | | | | min. | sec. |
| 60 Seconds (sec.) | =1 Minute (min.) | | | | |
| 60 Minutes | =1 Hour (hr.) | | hr. | 1= | 60 |
| 24 Hours | =1 Day (da.) | da. | 1= | 60= | 360 |
| 7 Days | =1 Week (wk.) | wk. | 1= | 24= | 1440= 86400 |
| 4 Weeks | =1 Lunar Month | mo. | 1= | 7= | 168= 10080= 604800 |
| | | 1 year= | 12= | 52= | 365= 8760= 525600= 31536000 |
| 13 L. Mo. 1 da. 6 hrs., or<br>12 Calendar Mo., or<br>52 Weeks (nearly) or<br>365 Days | Leap Year= | 12= | 52= | 366= | 8784= 527040= 31622400 |
| | =1 Common Year. | | | | |
| 366 Days | =1 Leap Year. | | | | |
| 100 Years | =1 Century. | | | | |

The time in which the earth revolves on its axis is called a day. The time in which it goes around the sun is called a solar year.

### Circular Measure

| Table | | Equivalents | | | |
|---|---|---|---|---|---|
| | | | ° | ′ | ″ |
| 60 Seconds (″) | =1 Minute (′) | | | | |
| 60 Minutes (′) | =1 Degree (°) | | | 1= | 60 |
| 30 Degrees (°) | =1 Sign (S) | S | 1= | 60= | 360 |
| 12 Signs or 360 Degrees | =1 Circumference (C) | C | 1= | 30= | 1800= 108000 |
| | | | 1= | 12= | 360= 21600= 1296000 |

Circular Measure is used in measuring angles, estimating and determining latitude and longitude, and also in measuring the motions of the heavenly bodies. Its standard unit is the degree.

### Miscellaneous Tables

| Counting | Equivalents | | | |
|---|---|---|---|---|
| | | | | doz. units |
| 12 Units = 1 Dozen (doz.) | | | gro. | 1= 12 |
| 12 Dozen = 1 Gross (gro.) | G. | gro. | 1= | 12= 144 |
| 12 Gross = 1 Great Gross (G. gro.) | | 1= | 12= | 144 |
| 20 Units = 1 Score (Sc.) | | | | |

### Paper

| Table | Equivalents | | | |
|---|---|---|---|---|
| | | | qr. | sh. |
| 24 Sheets = 1 Quire (qr.) | | rm. | 1= | 24 |
| 20 Quires = 1 Ream (rm.) | bun. | 1= | 20= | 480 |
| 2 Reams = 1 Bundle (bun.) | B | 1= | 2= | 40= 960 |
| 5 Bundles = 1 Bale (B) | | 1= | 5= | 10= 200= 4800 |

This count is used by Stationers and the Paper Trade. 20 Quires or 480 sheets properly constitute a Ream (short ream) but now often in the paper trade 500 sheets are figured to a Ream (long ream). A Printer's Ream contains 21½ quires or 516 sheets, the surplus to make up for waste.

### U. S. Money

| Table | | | Equivalents | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | Ct. | M |
| 10 Mills | (m)=1 Cent | (ct.) | | D | 1= | 10 | |
| 10 Cents | =1 Dime | (d) | | $ | 1= | 10= | 100 |
| 10 Dimes | =1 Dollar | ($) | | E | 1= | 10= | 100= 1000 |
| 10 Dollars | =1 Eagle | (E) | DE. | 1= | 10= | 100= | 1000=10000 |
| 20 Dollars | =1 Double Eagle | (DE) | | 1= | 2= | 20= | 200=2000=20000 |

The Gold Dollar weighing 25.8 grains is the standard unit for U. S. Money.

### English or Sterling Money

| Table | | | Equivalents | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | d | far. |
| 4 Farthings | (far.) =1 Penny | (d) | | s | 1= | 4 | |
| 12 Pence | =1 Shilling | (s) | | £ | 1= | 12= | 48 |
| 20 Shilling | =1 Pound | (£) | | 1= | 20= | 240= | 960 |
| | or Sovereign | (sov.) | | | | | |
| 21 Shilling | =1 Guinea | (G) | | G | 1= | 21= | 260=1040 |

The Sovereign or Pound Sterling is the standard unit of English money.

### French Money

| Table | | | Equivalents | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | ct | m |
| 10 Millimes | (m)=1 Centime | (ct) | | dc. | 1= | 10 | |
| 10 Centimes | =1 Decime | (dc) | | fr. | 1= | 10= | 100 |
| 10 Decimes | =1 Franc | (fr) | | 1= | 10= | 100= | 1000 |

The Silver Franc is the Standard unit of French money.

### Miscellaneous Weights

196 Pounds=1 Barrel of Flour.
200 Pounds=1 Barrel of Beef or Pork.
135 Pounds=1 Barrel of Potatoes
280 Pounds=1 Barrel of Salt.
400 Pounds=1 Barrel of Molasses.
200 Pounds=1 Barrel of Sugar.
240 Pounds=1 Barrel or Cask of Lime.
300 Pounds=1 Barrel or Cask of Cement.
100 Pounds=1 Quintal of Fish.
100 Pounds=1 Keg of Nails.
50 Pounds=1 Box of Soap.
20 Pounds=1 Box of Raisins.
100 Pounds=1 Cask of Raisins.
40 Pounds=1 Box of Cheese.
2 Pounds=1 Box of Cigars.
20 Pounds=1 Box of Soda.
25 Pounds=1 Box of Tobacco.
32 Pounds=1 Box of Tea.
60 Pounds=1 Box of Saleratus.
25 Pounds=1 Box of Chocolates.
56 Pounds=1 Firkin of Butter.
14 Pounds=1 Stone of Iron or Lead.
21½ Stones=1 Pig of Iron or Lead.
8 Pigs=1 Fother.

## The Metric System

**9. The Origin and Nature of the System.**—The Metric System originated in France. It is a system of weights and measures based upon the meter as the fundamental unit; hence the term, **metric.** From the meter which is also the basic unit of length, three other units are derived, viz: the **are,** the unit of surface; the **liter,** the unit of volume or capacity; and the **gram,** the unit of weight. These four constitute the primary units of the system. In its multiples and submultiples a decimal system is adopted. Ascending in value from each primary unit the measure is multiplied by ten, and bears a Greek prefix indicating its value, as **deca**—which signifies 10; **hecto**—which signifies 100; **kilo**—which signifies 1000; and **myra**—which signifies 10,000. Similarly descending in value, the terms bear a Latin prefix indicating their relation to the unit, as **deci**—which denotes 10th; **centi**—which denotes 100th; and **milli**—which denotes 1000th. The prefix **mega**—when employed, denotes a multiple by 1,000,000; the prefix **micro**—the 1,000,000th part. Thus with the primary units indicating the weight or measure, and the prefixes designating the number of units or fractional units clearly and definitely fixed in mind, the system is simple and self-explanatory.

**10. Demand for a Uniform System.**—Formerly every country or nation had its own units of weights and meas-

ures. When commerce spread and trading increased this lack of uniformity in measures and weights greatly complicated business transactions everywhere. A uniform system seemed desirable in commerce as well as in science. Men of affairs urged that such a system be devised and efforts were made to perfect it, but the task was not an easy one. To be of value, such a system must be scientific and practical; it must be adapted to measure and weigh anything; it must be suited to all people, for all purposes and for all times. Finally at the time of the French Revolution the extreme inconvenience of existing weights and measures, together with the confusion arising from the use of different standards in different localities led the National Assembly of France to appoint a commission to devise a more logical system. The result of the labors of this commission was the present **Metric System.**

**11. The Development and Basis of the System.**—Prior to the actual proposal in the French National Assembly which resulted in the Metric System, many features desirable in a universal system had been independently submitted. Decimals introduced into Europe by Stevenius became part of the new system. Abbe Mouton suggested self-defining terms which with some improvement were embodied. James Watt held that all units of weight and measure should be derived from the single unit of length, since every system of Weights and Measures must have an invariable unit for its base; and every other unit of its entire system should be derived from it, according to a fixed law. This was made a basic principle of the Metric System. Several others further proposed that this unit of length be taken from an invariable dimension found in nature. The French Government in order to obtain such an invariable unit, measured a degree of the arc of a meridian on the earth's surface for a basis; and from this computed the length of the meridional arc from the equator to the pole on the meridian of Paris. This length they divided into ten million equal parts and then took one of these parts for the unit of length, and called it a meter. Thus the meter, equal to one ten-millionth of the quadrant of the earth, or 1 yard, 3 inches and 37 hundredths of an inch, very nearly, became the basic unit of the Metric System as well as the primary unit of length. The International Standard Meter is recorded and preserved

by the distance between two transverse parallel lines ruled on a platinum-iridium bar, kept at the freezing temperature or 0° Centigrade, at the International Bureau of Weights and Measures at Sevres, near Paris, France.

For the sake of convenience great numbers of rods of the same length as this standard meter bar have been made and scattered all over the world. They are the common meter sticks and are divided into 10, 100 or 1000 equal parts, great care being taken to have all the parts of exactly the same length. While the meter originated as a fraction of the earth's quadrant or distance between the equator and the North pole it is not now thought of in that way but rather as the distance between the two lines on the bar mentioned above.

12. **Other Primary Metric Units.**—Using the Meter as a basis, the units of surface, volume and weight were also fixed. The **are** became the unit of surface or land measure and consists of a square whose side is 10 meters. The **Liter** was made the unit of volume or capacity for both liquid and dry measures and equals 1 cubic decimeter, or 61.026 cubic inches. It is the volume of a cube which is one-tenth of a meter (about 4 inches) on a side and represents a quantity of distilled water which at its maximum density will counterpoise the standard kilogram in a vacuum. It is equivalent to 1.057 quarts. A **liter** and a **quart** are therefore, roughly equivalent measures.

In order to establish a connection between the unit of length and the unit of mass or weight, the commission directed a committee of the French Academy to prepare a cylinder of platinum which should have the same weight as a liter of water at its temperature of greatest density, namely, 4° Centigrade (39° Fahrenheit). An exact equivalent of this cylinder, made of platinum-iridium and kept at Sevres with the standard meter, now represents the standard of mass in the metric system. It is called the standard kilogram and is equivalent to about 2.2 pounds. One one-thousandth of this was adopted as the **fundamental unit of weight** and named the **gram**. For practical purposes, therefore, the gram is equal to the weight of one cubic centimeter of distilled water at its maximum density, equal to 15.432 grains or .03527 ounces avoirdupois. The kilogram, or kilo, is the unit of common weight in trade and is a trifle greater than

2 1/5 pounds avoirdupois. The National prototype standard apportioned to the United States under the direction of the International Committee was received in 1890, and with the meter standard, also of platinum-iridium are in the custody of the Bureau of Standards of the Department of Commerce, Washington, D. C.

**13. The Scale of Tens.**—The denominations of the Metric System correspond to the orders of the Arabic Notation and are written like decimals, or U. S. Money on a scale of tens, each order of units occupying one place; the lowest denomination at the right. The names mill, cent, and dime, used in U. S. money, correspond to milli—, centi—, and deci— in the Metric system. Applying the system to our U. S. money we might call the eagle a deca-dollar, since it is ten dollars, the dime a deci-dollar, since it is one-tenth of a dollar, etc.

**14. Square and Cubic Measures.**—Units of square measures form a scale of hundreds; hence two places must be allowed for each order, and units of cubic or solid measures form a scale of thousands; hence three places must be allowed to each order. It is simply a squaring and cubing of the scale of tens.

**15. Approval and Adoption.**—The metric system was introduced in 1793 and definitely adopted by France in 1799. It spread rapidly from nation to nation. The United States legalized it on July 26, 1866, and in 1893 adopted the Meter and Kilogram, as the fundamental standards from which the yard and the pound are to be derived. Great Britain also has legalized it. In 1875 the leading Nations signed the treaty of Paris establishing the International Bureau of Weights and Measures providing for new standards of the meter and kilogram and for their international custody. John Quincy Adams, years before suggested that a council of nations be called to fix a single invariable and international system for all peoples and all times. This suggestion was realized in the treaty of Paris, the results of which assured the permanency and final success of the metric system, which is in actual use practically in every civilized nation on the globe. For scientific measurements it has become the universal language of the world.

## Metric Tables

### Measures of Length

| Metric Denominations | | Symbols | Metric Values | Common U.S. Values |
|---|---|---|---|---|
| | 1 Millimeter | mm. | .001M | .03937 in. |
| 10 Millimeters | =1 Centimeter | cm. | .01M | .3937 in. |
| 10 Centimeters | =1 Decimeter | dm. | .1M | 3.937 in. |
| 10 Decimeters | =1 Meter | M. | 1.M | 39.37 in. |
| 10 Meters | =1 Decameter | Dm. | 10.M | 32.81 ft. |
| 10 Decameters | =1 Hectometer | Hm. | 100.M | 19.93 rd. |
| 10 Hectometers | =1 Kilometer | Km. | 1000.M | .6214 mi. |
| 10 Kilometers | =1 Myriameter | Mm. | 10000.M | 6.214 mi. |

In the U. S. the value of the Meter is legalized at 39.37 inches, while in Great Britain and France its exact value is given as 39.37079 inches. On account of its more convenient size the centimeter, one one-hundredth part of a meter, is universally used for scientific purposes as the fundamental unit of length. The Meter is used in measuring cloths and short distances. The Kilometer, equal to 5/8 of a mile, nearly, is used for measuring long distances.

### Measures of Surface or Square Measure

#### Ordinary Surface Measure

| Metric Denominations | | Symbols | Common U. S. Values |
|---|---|---|---|
| | 1 Sq. Millimeter | sq. mm. | .00155 sq. in. |
| 100 Sq. Millimeters | =1 Sq. Centimeter | sq. cm. | .155 sq. in. |
| 100 Sq. Centimeters | =1 Sq. Decimeter | sq. dm. | 15.5 sq. in. |
| 100 Sq. Decimeters | =1 Sq. Meter or Centare | sq. m. | 1.196 sq. yds. |

The Centare or Square Meter is used as the unit of ordinary surface measure and is equal to 10.764 square feet, or 1.196 square yards.

#### Land Measure

| Metric Denominations | | Symbols | Common U. S. values |
|---|---|---|---|
| 1 Centare | =1 Sq. Meter | sq. m | 1.196 sq. yd. |
| 100 Centares | =1 Are | a | 119.603 sq. yd. |
| 100 Are | =1 Hectare | ha | 2.471 acres |

The Are is the unit of Land Measure and is a square whose side is 10 meters, and whose area equals 100 square meters. The Deci-are is 1/10 of the are; the Dec-are is 10 areas; an acre is 40 ares, nearly.

### Ordinary Solid Measure

| Metric Denominations | | Symbols | Common U. S. values |
|---|---|---|---|
| | 1 cu. Millimeter | cu. mm. | 0.000061 cu. in. |
| 1000 cu. Millimeters | =1 cu. Centimeter | cu. cm. | 0.061 cu. in. |
| 1000 cu. Centimeters | =1 cu. Decimeter | cu. dm. | 0.0353 cu. ft. |
| 1000 cu. Decimeter | =1 cu. Meter | cu. m. | 35.3166 cu. ft. |

The Cubic Meter is the unit of ordinary solid measure and equal to 1.308 cu. yds. The square and cubic measures are only the squares and cubes of the measures of length. The cubic Decimeter is called a liter when used as a unit of liquid or dry measure. The Cubic Centimeter and Cubic Millimeter are used for measuring minute bodies.

### Wood or Stone Measure

| Metric Denominations | Symbols | Common U. S. Values |
|---|---|---|
| 1 Decistere | Ds | 3.53 cu. ft. |
| 10 Descisteres=1 Stere | S | 35.316 cu. ft. |
| 10 Steres=1 Decastere | Ds | 2.759 Cord |

The Stere is the unit of wood or stone measures and is a cubic meter, equal to 35.3166 cu. ft. or .2759 cord.

The Common Cord is nearly the same as 3.6 steres, or 36 decisteres.

### Measures of Volume or Capacity
### Liquid and Dry Measure

| Metric Denominations | | Symbols | Dry Measure | Liquid Measure |
|---|---|---|---|---|
| Millimeter | | Hl | .061 cu. in. | .27 fl. dr. |
| 10 Millimeters | =1 Centiliter | Kl | .6102 cu. in. | .338 fl. oz. |
| 10 Centiliter | =1 Deciliter | Ml | 6.1022 cu. in. | .845 gi. |
| 10 Deciliter | =1 Liter | ml | .908 qt. | 1.0567 qt. |
| 10 Liters | =1 Decaliter | cl | 9.08 qt. | 2.64 gal. |
| 10 Decaliters | =1 Hectoliter | dl | 2.837 bu. | 26.42 gal. |
| 10 Hectoliters | =1 Kiloliter | L | 28.375 bu. | 264.18 gal. |
| 10 Kiloliters | =1 Myrialiter | Dl | 283.72 bu. | 2641.8 gal. |

The Liter is the unit of volume or capacity for both liquid and dry measures and is 1 cu. decimeter, or 1.0567 qt. liquid measure, or .908 qt. dry measure. It is generally used for measuring liquid in moderate quantities; the Decaliter, for measuring in large quantities. The Hectoliter is used for measuring grains, etc. It is equal to 2 bushels 3.35 peck. Four liters are a little more than 1 gal.; 35 liters very nearly 1 bushel. The Kiloliter equals 1 cubic meter, or 1 stere, or 35.316 cubic feet. It is the cube constructed on the meter as an edge, hence the liter is 1/1000 part of the kiloliter.

### Measures of Weight

| Metric Denominations | | Symbols | Equivalent in Avoirdupois Weight |
|---|---|---|---|
| 1 Milligram | | mg. | 0.154324 grains |
| 10 Milligrams | =1 Centigram | cg. | .1543 grains |
| 10 Centigrams | =1 Decigram | dg. | 1.543 grains |
| 10 Decigrams | =1 Gram | g. | 15.432 grains |
| 10 Grains | =1 Decagram | Dg. | .3527 oz. |
| 10 Decagrams | =1 Hectogram | Hg. | 3.527 oz. |
| 10 Hectograms | =1 Kilogram | Kg. | 2.2046 lb. |
| 10 Kilograms | =1 Myriagram | Mg. | 22.046 lb. |
| 10 Myriagrams or 100 kilos | =1 Quintal | Q. | 220.46 lb. |
| 10 Quintals or 1000 Kilos | =1 Miller or Tonneau | T. | 2204.6 lb. |

The Gram is the unit of weight and is the weight of 1 cu. centimeter of distilled water at its maximum density equal to 15.432 grains, or .03527 oz. Avoirdupois.

The Kilogram or Kilo, the the unit of common weight in trade and is a trifle greater than 2 1/5 lb. Avoirdupois.

### Miscellaneous Metric Equivalents and Comparisons
### Linear Measure

1 inch=2.54 Centimeter or 0.254 meter

1 foot=0.3048 meter
1 yard=0.9144 meter
1 rod=5.029 meter
1 mile=1609.35 meter or 1.6093 kilometer

1 Naut. Mile=1.8532 kilometer

1 Centimeter=0.3937 inches
1 Meter=39.37 in. or 3.2808 ft. or1.094 yd.
1 Decameter=32 ft. 9.7 in.
1 Hectometer=19 rd. 14 ft. 7 in.
1 Kilometer=198 rd. 13 ft. 10 in. or .6214 or 5/8 mi. nearly
1 Myriameter=6 mi. 68 rds. 6 ft. 4 in.

### Surface Measure

1 sq. in.=6.4528 sq. cm. or 0.0006452 sq. m.
1 sq. ft.=0.0929 sq. m.
1 sq. yd.=0.8361 sq. m.
1 sq. rd.=25.293 centares
1 acre=4047 Centares or 40.47 ares
1 sq mi.=259 hectares

1 are=119. sq. yds.
1 hectare=2.471 acres or 11,959.9 sq. yds.

### Cubic Measure

1 cu. in.=16.387 cu. cm.
1 cu. ft.=28.317 cu. dm.
1 cu. yd.=.7645 cu. m.
1 cord=3.6243 steres

1 cu. meter=35.3166 cu. ft. or 1.308 cu. yds.
1 stere=.2759 cord

### Dry and Liquid Measure

| Dry | Liquid |
|---|---|
| 1 pint=33.6 cu. in. | 1 gill=7.21875 cu. in. |
| 1 quart=67.2 cu. in. | 1 pint=28.875 cu. in. |
| 1 peck=537.6 cu. in. | 1 quart=57.75 cu. in. |
| 1 bushel=2150.4 cu. in. | 1 gal.=231 cu. in. |

| Dry | | | Liquid |
|---|---|---|---|
| 0.001816 | pints=1 | milliliter | =0.008453 gills. |
| 0.018161 | pints=1 | centi iter | =0.084534 gills. |
| 0.181611 | pints=1 | deciliter | =0.845345 gills. |
| 1.816112 | pints=1 | liter | =1 quart, .11336 pints. |

1 peck 1.08056 qt.=1 decaliter=2 gal. 2 qt.1.1336 pints
2 bu. 3 pk. 2 qt. 1.6112 pt.=1 hectoliter=26 gal. 1 qt. 1 pt.1.344 gills
28 bu. 1 pk. 4 qt. 0.112 pt.=1 kiloliter =1 tun 12 gal.1 pt. 1.44 gills

1 cu. in.=0.0164 liter
1 cu. ft.=28.317 liter
1 cu. yd.=765 liter
1 quart=1.1011 liter
1 peck U. S.=8.81 liter
1 peck Brit.=9.09 liter
1 bushel U. S.=35.24 liter
1 bushel Brit.=36.35 liter
2 bushel 3.35 pk.=1 hectoliter

1 fluid dram=0.00269 liter
1 fluid ounce=0.0296 liter
1 gill=0.1183 liter
1 pint=0.4732 liter
1 quart=0.9463 liter
1 gal. (stan.)=3.785 liter
1 gal. (imperial)=4.543 liter
2.64 gallon=1 decaliter

### Weights

1 grain=64.8 Milligram or 0.0648 gram
1 ounce, Troy=31.103 gram
1 ounce, Avoir=28.3495 gram
1 pound, Avoir=453.59 gram
1 pound, Avoir=.4536 kilogram
2 1/5 pound, Avoir=1 kilogram
1 pound, Troy=.37324 kilogram
1 ton=.907 tonneau
1 dime=2½ gram
1 5-cent nickel=5 grams
1 silver dollar=25 grams

1 milligram=0.0154 grains Troy
1 centigram=0.1543 grains Troy
1 decigram=1.5432 grains Troy
1 gram=15.4327 grains Troy or 0.03527 oz. Avoir.
1 decigram=0.3527 oz. Avoir.
1 hectogram=3.5274 oz. Avoir.
1 kilogram=2.2046 lbs. Avoir.
1 myriagram=22.046 lbs. Avoir.
1 quintal=220.46 lbs. Avoir.
1 millier or ton=2204.6 lbs. Avoir.
15 grams=½ oz. at U. S. P. O.

### Measurements of Irrigation Water

The measurement of irrigation water in the Western States has brought about an entirely different and somewhat complicated system of measurement. This system varies in different localities, on account of the variation in the method of payment for water.

Space does not permit us to give a description of the methods of measurement, or of the devices which have been adopted. We present merely a definition of the various units in use.

**Acre Inch.**—This is one-twelfth of an an acre-foot or the equivalent of a sheet of water one acre in area and one inch deep. One cubic foot per second running continuously for one hour will supply about one acre inch.

**Acre Foot.**—This is equivalent to a body of water one acre in area and one foot deep, or, 43,560 cu. ft. One cubic foot per second (50 So. California inches or forty California Statute inches) running continuously for 24 hours will supply about 2 acre feet (1.9834 acre ft.) This unit is also used in estimating coal in place.

**Cubic Foot Per Second.**—The equivalent of a stream of water one foot wide and one foot deep flowing at the rate of one foot per second.

**Gallon.**—When the water is pumped the quantity is usually estimated in gallons per minute (G. P. M). One cubic foot per second is about the same as 450 gallons per minute.

**Miner's Inch.**—The miner's inch of water does not represent a fixed quantity, being measured generally by the arbitrary standards of the various ditch companies. Generally, however, it is considered to mean the quantity of water that will escape from an opening one inch square through a two inch plank with a steady flow of water standing 6 "in" above the top of the escape aperture, the quantity so discharged amounting to 2274 cubic feet in 24 hours. Locally, miner's inch represents a flow of 1½ cubic feet of water per minute and the statute miner's inch in California is so defined. It is equivalent to a flow of 11¼ gallons per minute. The old miner's inch in California is equivalent to a flow of nine gallons per minute.

**Twenty-Four Hour Inch.**—This unit represents one inch (the exact amount of which varies with locality and local custom) running for twenty-four hours.

## Mensuration or Geometry

1. Any one who has occasion to determine the length of lines, the area of surfaces, or the volume of solids may find in the following definition, rules and examples just the information he needs.

2. **Definition of Terms.**—Geometry is that science which treats of the powers and properties of magnitudes in general, where length, breadth and thickness are considered. **A Point** ( . ) is a position without dimensions. **A line** (————) is a figure of one capacity, namely, length. **A superficies** (surface) is a figure of two dimensions, length and breadth.

A **solid** is a figure of three dimensions, length, breadth and thickness. **Parallel** means extended in its same direction and equidistant at all points (═══). **Horizontal** means parallel with the water line. **Vertical** or **Perpendicular** means parallel with a plumb line. **Diagonal** means obliquely across a **polygon (figure 4).**

Fig. 1 Fig. 2 Fig. 3 Fig. 4 Parallel lines

3. **An angle** (Fig. 1) is formed by two straight lines diverging from a common point called the vertex. A **right angle** is formed by two straight lines meeting perpendicularly —an angle of 90° or the fourth part of a circle. An **oblique angle** may be acute (Fig. 1) or obtuse (Fig. 3), either greater or less than a right angle.

4. A **plane** has area or surface only. A **polygon** is a plane figure having three or more equal sides. A **triangle** (Figs. 5, 6 and 7) is a plane figure bounded by three straight lines. A triangle may be **equilateral**, that is, with three sides equal (Fig. 6); **Isosceles**, with two sides equal (Fig. 7); or **scalene** with none of its sides equal (Fig. 5).

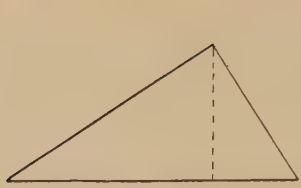


Fig. 5

Fig. 6

Fig. 7

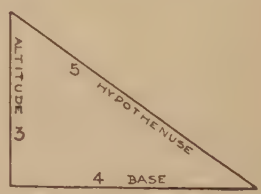
The **base** of a triangle is the side on which it is supposed to stand. The shortest distance from the base to the opposite angle (Fig. 7) or between parallel lines (Fig. 10) is called the **perpendicular** or **altitude.**

**5. To Find the Area of a Triangle.—Rule:** Multiply the base by the altitude and take half of the product. Example: Find square feet in a triangle, base 10 feet, altitude 6 feet. $10\times6\div2=30$, Answer.

**Rule:** From half the sum of the 3 sides subtract each side separately; then multiply the half sum and the three remainders together; then extract the square root.

**6. Right Angled Triangles.**—A right angled triangle has one right angle. The longest side is called the **hypothenuse.** The other two sides **base** and **altitude.** The square of the hypothenuse equals the sum of the square of the other two sides. Thus:

**To find the hypothenuse: Rule:** Add the square of the base to the square of the altitude and extract the square root. **Example:** Find the hypothenus of a right angled triangle the base and altitude of which are 4″ and 3″ respectively. $4^2+3^2=16+9=25$, the square root of 25 is 5″, Answer.




**To find the Base or Altitude.**—Rule: From the square of the hypothenuse subtract the square of the other known side and of the difference extract the square root. Thus: $5^2-4^2=25-16=9$; the square root of 9 is 3, the altitude.

**7. A Parallelogram** is a plane figure bounded by four straight lines whose opposite sides are equal. A **rectangle** (Figure 8) is a right angled parallelogram; a **square** is an

equilateral rectangle; a **rhomboid** (Figure 10) is an oblique angled parallelogram.

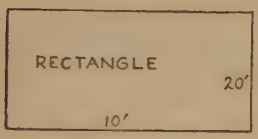



Fig. 8

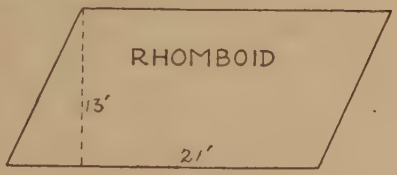



Fig. 10

**To Find the Area of a Paralleogram.—Rule:** Multiply the length by the width. Eaxmples: How many square feet in a rectangle 10′x20′? 10×20=200′ Ans. How many square feet in a rhomboid 13′x21′? 13×21=273′ Ans.

8. **A Trapezoid** (Fig. 11) is a quadrilateral having two of its sides parallel.

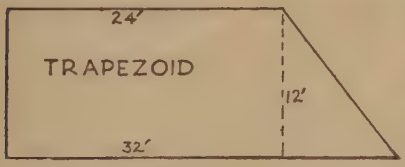



Fig. 11

**To find its area.—Rule:** Multiply its average length by the width. **Example:** How many square feet is in a trapezoid whose parallel sides are 24′x32′ and whose width is 12′? Solution: 24+32÷2=28′ average length. Then 28×12=336 square feet, Answer.

9. **A Trapezium** (Fig. 12) is a quadrilateral having none of its sides parallel.

**To find its area. Rule:** Form two triangles by a diagonal line, then multiply the length of the diagonal by the sum of the altitudes of the two triangles and take half the product. **Example:** Find square feet in a trapezium whose diagonal is 40′ and altitudes 10′x12′? Solution: 10+12=22; 22×40=880÷2=440 square feet, Answer.

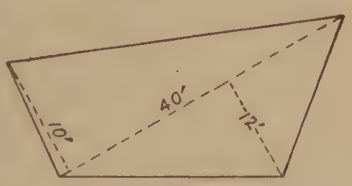



Fig. 12

10. **A Circle** is a plane figure bounded by a curved line called the circumference (Fig. 12). The **diameter** is a straight line (CE) across a circle through its center. The **radius** is

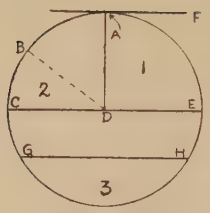


Fig. 13

a straight line (C-D) from the center to the circumference. An **arc** is any part of the circumference (G-H). A **chord** is a straight line joining the ends of an acre (G-H). A **tangent** (A-F) touches the circumference without cutting it. A **segment** is the space (3) enclosed by an arc and a chord. A **sector** (1) is the space enclosed by an arc and two radii.

**11. The Angles of a Circle.**—A circle is divided into 360 degrees (360°). From C around the circumference to E is an angle of 180°. From C to A is a **quadrant** or an angle of 90°. From C to B is an angle of 45°. A **sextant** is one-sixth of a circle.

**12. To Find the Circumference of a Circle** when the diameter is given. **Rule:** Multiply the diameter by 3 1-7 (3.14159). **Example:** Find the circumference of an automobile tire whose diameter is 14 inches? Solution: 14×3 1-7 =44″, Answer.

**13. To Find the Diameter of a Circle** when the circumference is known. **Rule:** Divide the circumference by 3 1-7 (or multiply the circumference by .3183). Thus the diameter of a 44 inch tire: 44÷3 1-7=14 inches, Answer.

**14. To Find the Area of a Circle.—Rule:** Multiply the square of the diameter by .7854; or the square of the radius of 3.1416, or the square of the circumference by .07958. Example: Find the number of square feet an animal can graze staked to a rope 10 feet long. Solution: $10^2 \times 3.1416 = 314.16$ square feet, Answer.

**15. To Find the Radius of a Circle** knowing the area. **Rule:** Multiply the area by .3183 and extract the square root of the product. Example: Find the length of rope to allow an animal to graze 1,000 square feet. Solution: 1,000×.3183= 318; the square root of 318=17.8′, Answer.

**16. To Find the Area of a Sector of a Circle,** when the area of the whole circle and the angle of the arc are know. This is a problem of proportion. The angle of the arc is in the same proportion to 360° as the area of the sector is to the area of the whole circle. Thus if the angle of the arc is 60° and the area of the circle is 72 square inches we have:

60:360::X:72. 360X=4320. X=12 sq. inches, Answer.

**17. An Ellipse** is a plane figure bounded by an oval curved line and has a long and a short diameter or axis.

**To find the circumference of an Ellipse.** Rule: Multiply the sum of the two diameters by 3.1416 and take half the product.

Example (Fig 14),
$(8+12)\times 3.1416=62.83$ Ans.

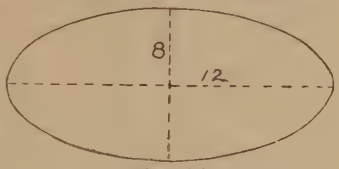


Fig. 14

**18. To find the area of an Ellipse:** Multiply the product of the two diameters by .7854. Example, (Fig. 14):
$8\times 12=96\times .7854=68.78$, Ans.

**19. To Find the Area of Polygons,** having equal sides and equal angles.

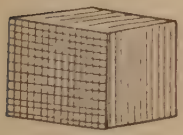
Triangle Pentagon Hexagon (Fig. 15)

Rule: Multiply the square of one of the equal sides of a triangle by .433; of a pentagon by 1.7205; of a hexagon by 2.5981; of an octogon by 4.8284.

Example: Find the area of the above polygons.

Triangle—$5^2\times .433=18.82$
Pentagon—$5^2\times 1.7205=43.01$
Hexagon—$5^2\times 2.5981=64.95$

**20. A Cube** is a solid having six equal square sides.


Cube

**To find its area:** Multiply the area of one side by six; **To find its volume:** Multiply the length, breadth and thickness together. Example: Find the square inches in the surface of a three inch cube.

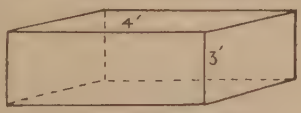
$3\times 3\times 6=54$ square inches, Ans.

Find sq. feet in a cubic yard: $3\times 3\times 3=27$.

**21. A Parallelopiped** is a solid whose six sides are all rectangles.

**To find its area:** Add the areas of the six sides.

**To find its volume.** Same as



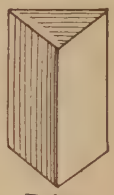
Parallelopiped

a cube. Example: Find the area of a box whose dimensions are 4′x3′x2′. The area of three sides is figured as follows: 4×3=12, 4×2=8, 3×2=6; Total, 26 sq. feet. The three other sides being equal, 26×2=52 square feet, Answer.

22. **A Prism** is a solid having three or more rectangular sides whose ends are parallel.

**To find its area:** Add the areas of the sides and ends.

**To find its volume:** Multiply the area of one end by the length. Example: Find the area of a triangular prism whose three sides are10″x5″. 10×5×3=150 square inches, area of the three sides. $5^2$×.433 (par. 19) ×2=21.6 square inches, area of the two ends. 150+21.6=171.6 square in., Answer. Find the number of cubic inches in the same prism. Solution: $5^2$×.433×25=270 cubic inches, Answer.



Prism

Sphere

3. **A Sphere** is a solid bounded by a uniformly curved surface.

**To find its area:** Multiply the square of the diameter by 3.1416, or the square of the circumference by .3183.

**To find its volume:** Multiply the cube of the diameter by .5236. Thus the area of a sphere whose diameter is 10 inches is 314.16 square inches, Answer; The volume is 523.5 cubic inches, Answer.

24. **A Cylinder** is a round body of uniform diameter whose ends are parallel.

**To find its area:** Multiply the circumference by the length and add the areas of both ends.

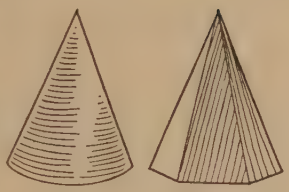
**To find its volume:** Multiply the area of one end by the length.

Example: Find the area and the volume of a cylinder 10 feet in circumference and 20 feet long. Solution: 10×20=200+($10^2$×.07958×2) (par. 14)=215.91 square feet, area. $10^2$×.07958 (par. 14)×20=159 cubic feet, volume.

Cylinder

25. **A Cone** is a solid which has a circular base and tapers uniform to a point called the apex. A **pyramid** is a solid resembling a cone having three or more triangular sides.

**To find their area:** Multiply the circumference or perimeter of the base by the height and to one-half of this product add the area of the base.



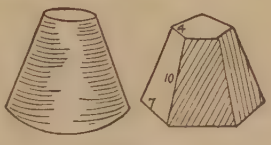
Cone Pyramid

Example: Find the area of a cone whose base circumference is 10′ and height 30′: $10\times30\div2=150$ sq. inches, area in convex surface. $10^2\times.07958$ (par. 14)$=7.95$ square inches, area of base. $150+7.95=159.95$ square inches, Answer.

**To find their volume:** Multiply the area of the base by the height and take 1-3 the produce. Example: Find the number of cubic feet in an eight sided pyramid whose perimeter is 16 feet or each side 2 feet and whose height is 10 feet? Solution: $2^2\times4.8284$ (par. 19)$=19.31$ square feet, area of base. $19.31\times10\div3=64.36$ cubic feet, Answer.

26. **A Frustum** of a cone or pyramid is the part which remains after cutting off the top, parallel to the base.

**To find its area:** Multiply the sum of both circumferences or perimeters by the slant height and to ½ of the product add the area of each base.




Frustums

Example: Find the area of a frustum of a cone whose slant height is 20 inches, and circumferences are 40 and 50 inches? $(40+50\times20\div2)+(40^2+50^2\times.07958)$ (par. 14)$=1226.27$ sq. inches, Answer.

**To find its volume:** (a) Square both ends of one side or the diameters of both ends if round. (b) To these two squares add the product of the two ends or diameters, when multiplied together; one-third of this sum gives the area of the average base of the frustum of a square pyramid, which multiplied by .7854 equals area of average base of frustum of a cone; multiply by .433 of a three sided frustum; by 1.7205 of a five sided frustum; by 2.5981 of a six sided frustum; by 4.8284 of an eight sided frustum. (c) Multiply the average area by the perpendicular height.

Example: Find the cubic feet in a six sided frustum, the two ends of one side being 4 feet by 6 feet and 10 feet high.

Solution:

(a) $7^2+4^2+(7\times4)=93$.

(b) $93\div3\times2.5981=80.54$ sq. ft., area of average base.

(c) $80.54\times10=805.4$ cubic feet, Answer.

27. **A Spheroid** is an elongated globe having a fixed and revolving axis.

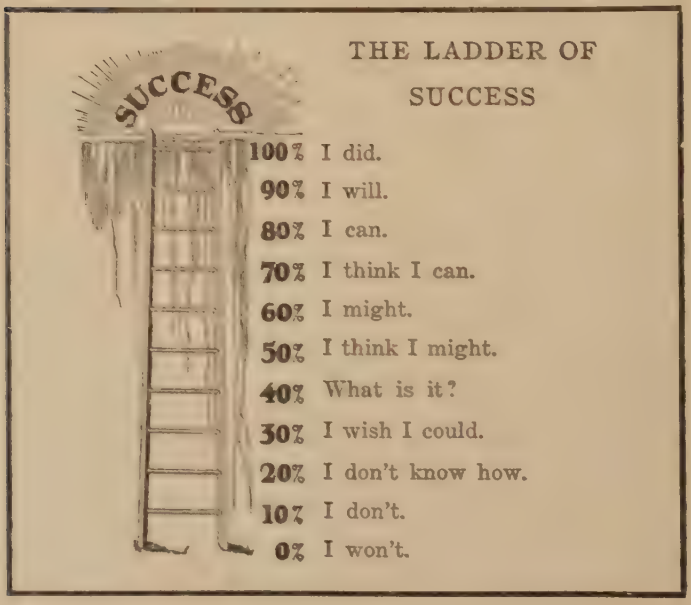
To find its area: Multiply the revolving axis by the fixed axis and that by 3.1416.

To find its volume: Multiply the square of the revolving axis by the fixed axis and that by .5236.

Examples: Find the area and volume of a spheroid, revolving axis 10 inches, fixed axis 20 inches.

$10\times20\times3.1416=628.32$ square inches, Area.

$10^2\times20\times.5236=1047.2$ cubic inches, Volume.



## Land Measure

**1. How to Locate Land.**—A tract of land one mile square containing 640 acres is called a section. The public domain of the United States is divided by north and south lines, six miles apart, into strips called ranges. These are again divided by east and west lines, six miles apart, into squares of 36 square miles, called townships.

**2. Designated by Numbers.**—The ranges are numbered both east and west from some principal meridian, and the townships in each range are numbered both north and south from a certain base line, for the purpose of easy reference by the land offices. The 36 sections in each township are numbered from the north east corner west, and back on the second tier, east, etc.

**3. School Land.**—Section 16 in each township is reserved for school purpose; also Section 26 in some of the newer states.

**4. How to Read and Write Descriptions.**—The accompanying cut will explain how legal descriptions are written.

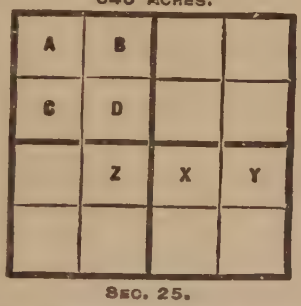
A, B, C and D are described as the N.W.¼ of Sec. 25.

A is the N.W.¼ of the N.W.¼ of Section 25.

C, D is the S.½ of N.W.¼ of Section 25.

X, Y is the N.½ of S.E.¼ of Section 25.

Z is the N.E.¼ of S.W.¼ of Section 25.




Where the government surveys cannot be used a full description must be written out by the county surveyor.

**5. To Find the Number of Acres in a Tract of Land.**—Divide the number of square roads by 160, or the number of square chains by 10. A field 80 rods long and 40 rods wide contains 3200 square roads. $3200 \div 160 = 20$ acres, Ans.

A tract of land 27 chains 34 links (27.34 ch.) by 12 chains 84 links (12.84 ch.) contains $27.34 \times 12.84 = 351.03$ sq. ch.; $351.03 \div 10 = 35.1$ acres, Ans.

### How to Locate a Mine

**1. Who May Locate a Mine.**—Any person of lawful age who is a citizen of the United States or shall have legally declared his intention to become such may locate a mine.

**2. Must Be Actually Discovered.**—A mineral bearing ledge, lode or vein must be actually discovered on the claim it is proposed to locate.

**3. The Ground Entitled To.**—Unless the width is modified by a law of a local mining district, the ground entitled to with a mining claim is 1,500 feet along the ledge by 300 feet each side of the ledge, or 600 feet wide.

**4. Point of Discovery.**—The point of discovery may be within any part of the 1,500 feet.

**5. Boundary Description.**—In the boundary description of a mine use the terms easterly and westerly, northerly and southerly instead of the more positive terms east, west, etc. Make the general description as short as possible, and mention adjacent or neighboring mines, distance and direction, well-known natural objects, or permanent monuments.

**6. Location Notice.**—The location notice must be posted at the point of discovery. The corners of claims must be marked by blazed trees, stakes or monuments.

About five days are allowed to post up location notice, and from ten to thirty days to have the same recorded. Record with the district recorder, or if an unorganized mining district, record with the county recorder. If not in actual personal possession of the proposed location, post location notice and have it recorded as soon as possible.

**7. Assessment Work.**—To hold a mine $100 worth of assessment work in labor or improvement must be done on it annually, and the calendar year in which to commence the assessment work begins with the January following the fractional year in which the location is made. Two or more locators on the same ledge may consolidate and do the amount of their combined assessment work on one claim of the group. The affidavits of assessment work by two credible witnesses should annually be filed with the district or county recorder. When $500 worth of assessment work has been done on a mine a patent to it may be obtained from the Government.

# SHORT METHODS OF ARITHMETIC

Modern business demands practical and concise labor-saving rules and methods. In a great many instances the ordinary methods of calculation prove too slow and cumbersome for the present age and consequently quicker and shorter computations have been devised. In the following short methods of computation we have endeavored to show in a clear and comprehensible manner how calculations may be shortened and accurate results obtained at a great saving of time and labor over the ordinary procedure. Our aim has been to show the "how" rather than the "why" of the operation, and merchants, mechanics, farmers, in fact everybody who uses figures should find valuable information in these pages.

## The Grouping or Lightning Method of Addition.

The following example will explain the process together with a unique method of disposing of the carrying figures:

"Lightning Addition" simply is the ability to see and take in the result of two, three or more figures at a time without stopping to add each figure separately.

PROCESS: Commencing at the bottom of the right hand column, sum up and add as indicated by the brackets, thus: 10+18=28+18=46.

| | |
|---|---|
| | 44 |
| 689 | |
| 274 | |
| 925 | |
| 657 | |
| 542 | |
| 759 | |
| 461 | |
| 632 | |
| 547 | |
| 5486 | |

Write the tens or carrying figure 4 over the next column and the unit figure 6 under the column added. Now add the next column in the same way: 13+14=27+17=44+4=48. Again write the carrying figure 4 over the next column and the right-hand figure 8 directly below the added column. Proceed with the last column as before, viz: 15+18=33+17=50+4=54 which place below the column and the answer 5486 is complete.

To avoid the possibility of mistaking the carrying figure for an entry or sum, a light line may be drawn below the carrying figures, or they may be written smaller than the others and with a lead pencil.

THE BEST COMBINATIONS.—Group the figures, as conveniently as possible. Sometimes the grouping of only two figures will make better combinations than three or more. Groups of 5, 10, or 15 are always easy to add. When several numbers of the same denomination occur in a column combinations can be made faster by mentally multiplying the like figures and adding to them the unlike ones, as for instance in a column where there are four 5's and one 3, group 4×5+3=23. After a little practise the mind readily grasps the groups of figures in the quickest and most convenient way. Two or more columns can be added at a time in the same manner.

Never add up a column thus: 7 and 2 are 9 and 1 are 10 and 9 are 19 and 2 are 21 and 7 are 29 and 5 are 33 and 4 are 37 and 9 are 46.

## Adding by "Casting Out the Tens."

This method is sometimes used to relieve the mind when adding long columns of figures.

EXAMPLE.—Begin at the bottom and add the first column until a sum of 10 or more is reached, thus: 7+5=12. Cast out or disregard the 10 for the time being by placing a dot or dash over the 5, and continue adding 2+3+4+6=15. Place a dot or dash above the 6 and disregard the 10 and keep on adding 5+1+2=8. Place the 8 under the column added. Now count up the number of tens dropped (2) and add them to the next column thus: 2+5+1+8=16. Mark the 8, then 6+3+5=14. Mark the 5 and continue 4+9=13. Mark 9 and conclude with 3+4=7, placing the 7 under the column added. Count up the number of tens dropped which is 3 and add them to the next column which completes the sum 378.

42
-
91
—
56
34
-
83
-
15
57
——
378

## The Civil Service Method of Addition.

EXAMPLE:

249227
963685
325436
892705
162231
40010
432170
504360
———
24
30
25
27
34
32
———
3569824

OPERATION

Commence at the right and add each column of figures by itself. Group figures wherever possible. For instance the first column equals 24; put down the entire number 24; the next column equals 30; put that down as shown; the next column equals 25, the next 27, and so on. When all the columns are added and their sums placed as shown, add these sums for the final result.

The advantage of this method is that a person's attention may be drawn to other things while figuring, and then be able to resume work again where he left off. The work is always complete as far as the columns are added. In places of business where there is much talking or other disturbance this method commends itself.

## Adding and Subtracting Fractions.

RULE 1. To find the sum of two fractions with 1 for numerator, add the denominators for the numerator of the answer and multiply them for the denominator.

EXAMPLE: $1/4 + 1/5 = \begin{cases} 4+5=9 \\ \hline 4\times 5=20 \end{cases}$ answer.

RULE 2. To subtract them, subtract the denominators for the numerator of the answer and multiply them for the denominator.

EXAMPLE: $1/7 - 1/10 = \begin{cases} 10-7=3 \\ \hline 7\times 10=70 \end{cases}$ answer

## Methods of Proving Addition.

Although there are numerous ways of verifying the results of addition there is really no royal road or "short-cut" to absolute proof of the accuracy of the operation. However, the following methods may be of value:

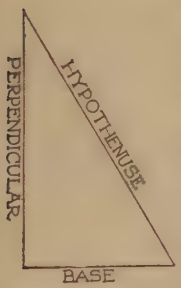
1st. After adding the columns upward, add the same downward. With different combinations of figures each way, if both sums agree the answer may be assumed as correct. With the Civil Service Method of Addition each column can be proved separately by this method.

2nd. After adding long columns of figures in the usual way, split them in the middle and add each half separately and then combine the results. If the two operations agree the answer is invariably correct.

3rd. The sum of the digits of the answer will, when the answer obtained is correct, be found to equal the sum of the units obtained from each line in the example.

Operation: 743=7+4+3=14=1+4=5
235=2+3+5=10=1+0=1
981=9+8+1=18=1+8=9
15=1+5=6
1959=1+9+5+9=24=2+4=6

## How to Find the Perpendicular Height of a Right-Angled Triangle When Base and Sum of Perpendicular and Hypothenuse Are Known.




RULE:—From the square of the sum of Perpendicular and Hypothenuse take the square of the base and divide the difference by twice the sum of Perpendicular and Hypothenuse.

Or, divide the square of the base by the combined length of Perpendicular and Hypothenuse; one-half of the difference between the quotient and the combined length is the Perpendicular.

EXAMPLE:—A flagpole 90 feet high is broken by the storm in such a manner tha its top reaches the ground 30 feet from the stump, forming a right-angled triangle. How high up is the flagpole broken?

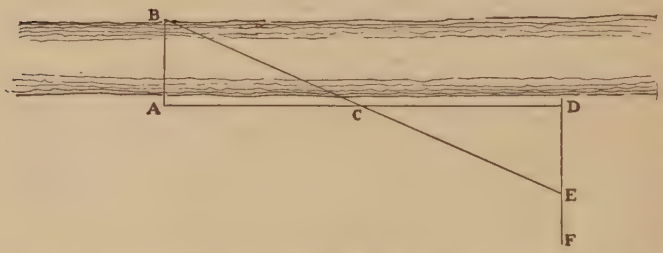
SOLUTION:—90×90—30×30=7200
7200÷2×90=40 Ans.

30×30÷90=10
or
90—10÷ 2=40 Ans.

## How to Measure the Distance Across a River, or to Some Other Inaccessible Point.

The approximate distance across a river or to some other inaccessible point, where the ground is level, may be determined by means of the brim of a hat. Stand on the river bank, close to the water and look across to the other shore. Lower the brim of your hat till its edge just cuts the other bank. In this position and steadying yourself by placing the hand under the chin, turn around carefully until you face level ground on your side of the river, and observe where the edge of your hat again cuts the ground. The distance between that point and where you stand is the breadth of the river.

## Another Method to Find the Distance From A to B Across the River.




Measure any distance, AD along the shore. Then measure half the distance between A and D planting a stake at C. At D run a line as far as F and perpendicular to line AD. Then measure along line DF until you reach a point that falls in line with points B and C. Call this point E. Now the triangles ABC and CDE are similar and distance DE equals distance AB across the river.

## How to Find the Day of the Week For Any Given Date.

RULE:—To the two right hand figures of the given year add its fourth part (disregarding fractions) and the day of the month and its ratio, as shown in the table below: divide this sum by 7 and the remainder will indicate the day of the week: 1 denoting Sunday, 2 Monday, 3 Tuesday, 4 Wednesday, 5 Thursday, 6 Friday, 0 Saturday. This applies to dates from 1800-1899; for dates from 1700-1799 add 2, and for dates from 1900-1999 subtract 2 before dividing by 7.

### Ratios For the Months.

| | | | | | |
|---|---|---|---|---|---|
| January, October | 3 | February, March, November | 6 | April, July | 2 |
| May—4 June—0 August—5 | | September, December | 1 | | |

### Ratios For Leap Years

January—2 February—5

1. EXAMPLE:—On what day of the week was John born if the date was September 12, 1841?

SOLUTION:—

| | |
|---|---|
| Last two figures of the year | 41 |
| Add ¼ of same | 10 |
| Day of the Month | 12 |
| Ratio for September | 1 |
| | 7(64 |
| | 9—1=Sunday. |

2. EXAMPLE:—The Declaration of Independence was signed July 4, 1776. What day of the week was it?

SOLUTION:—

| | |
|---|---|
| Last two figures of the year | 76 |
| Add ¼ of same | 19 |
| Day of the month | 4 |
| Ratio for July | 2 |
| Add for 18th Century | 2 |
| | 7)103 |
| | 14—5=Thursday |

3. EXAMPLE:—On what day of the week did February 28, 1908 fall? (Leap year and 20th Century:)

SOLUTION:—Last two figures of the year 08
Add ¼ of same 2
Day of the month 28
Ratio for February (L. Y.) 5
43
Subtract for 20th Century 2
7)41
5—6=Friday

4. EXAMPLE:—On what day of the week was Mary born if the date was April 21, 1900?

SOLUTION:—Last two figures and ¼ of same 00
Day of the month 21
Ratio for April 2
Subtract for 1900
23
2
7)21
3—0=Saturday.

## Lightning Method of Multiplication and Division

To multiply by 125, divide by 8, and call it thousands, because 125 is ⅛ of a thousand.

To multiply by 12½, divide by 8; call it hundreds.

To multiply by 1¼, divide by 8; call it tens.

To multiply by 62½, divide by 16, call it thousands.

To multiply by 6¼, divide by 16, and call it hundreds.

To multiply by 31¼, divide by 32, and call it thousands.

To multiply by 333 1-3, divide by 3, and call it thousands.

To multiply by 33 1-3, divide by 3, and call it hundreds.

To multiply by 3 1-3, divide by 3, and call it tens.

To multiply by 50, divide by 2, and call it hundreds.

To multiply by 66 2-3, divide by 15, and call it thousands.

To multiply by 833 1-3, divide by 15, and call it ten thousands, by annexing four ciphers.

To multiply by 83 1-3, divide by 12, and call it thousands.

To multiply by 8 1-3, divide by 12, and call it hundreds because 8 1-3 is 1-12 of a hundred. The reason is similar in each case.

To multiply by 166 2-3, divide by 6, and call it thousands.

To multiply by 16 2-3, divide by 6, and call it hundreds.

To multiply by 1 2-3, divide by 6, and call it tens.

To mutiply by 37½, take ⅜ of the number, and call it hundreds; 87½, ⅞ of the number, and call it hundreds, etc.

We simply reverse these methods to divide. To divide by 10,100, 1,000, etc, we remove the point one, two and three places to the left.

To divide by 25, remove the decimal point two places to the left, and multiply by 4.

Removing the point two places divides by one hundred; hence the quotient is four times too small; hence we remove the point two places, and multiply by four.

To divide by 2½, remove the point one place to the left, and multiply by 4.

To divide by 125, remove the point three places to the left, and multiply by 8.

To divide by 12½, remove the point two places to the left, and multiply by 8.

To divide by 1¼, remove the point one point to the left, and multiply by 8. There are about 1¼ cubic feet in one bushel. hence dividing the number of cubic feet by 1¼ gives the number of bushels nearly.

To divide by 133 1-3, remove the point three places to the left, then multipy by 3 and divide by 4.

To divide by 8 1-3, remove the point two places to the left, and multiply by 12.

## Short Methods of Multiplication.

### How to Multiply Any Small Number Ending with 5.

Example: 25X85. To the product of 2 and 8 add one-half their sum and to this result annex 25.

Solution: 25 5X5—25
85 2×8—16, 16+½ (2+8)—21.

2125

This rule is very simple and useful; practice it, it never fails.

### The Complement Rule.

98-2
91-9
——
8918

The complement of a number added to the number makes it 10, or 100, or 1000, etc. The complement of 98 is 2, of 91 is 9. To find the product of these two numbers multiply the complements together; and for the other two figures subtract across, either the two from the 91, or the 9 from the 98.

### How to Multiply Any Number by 21, 22, 23, 24, etc.

2102
23
——
48346

Multiply each figure in the multiplicand by the units figure in the multiplier, increasing each separate product by double the figure to the right of the one multiplied; double the last figure.

Solution: $3\times2=6$, $3\times0=0$ and double the right hand figure 2—4. $3\times1=3$, and double the right hand figure, 0,=3 $3\times2=6$, double the 1,—8. Double the last figure.

### How to Multiply Any Number by 21, 31, 41, etc.

230412
460824
————
4838652

To multiply any number of two figures when the last is 1, or of three figures when the last two are 01.

Example: Multiply 230412 by 21. Instead of the ordinary long process, simply multiply by 2, placing the product one figure to the left, and then add. This rule is as practical as it is simple; try it, using 31, 51, 201, etc.

### How to Multiply Any Two Numbers Whose Right-Hand Figures Add to Ten, and the Left-Hand Figures Are the Same.

Example: 87
83
——
7221

Three times 7 are 21. Put down both figures, add one to the second figure, and then say 9 times 8 are 72. Put down both figures, and you have the correct result. This rule is practical, and the application of it is simple.

Try it with,

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 21 | 32 | 43 | 54 | 65 | 76 | 87 | 98 |
| 29' | 38' | 47' | 56' | 65' | 74' | 83' | 92' |

### To Multiply by 9's.

To multiply by 9, 99, or any number of 9's annex as many ciphers to the multiplicand as there are 9's in the multiplier, and from the result subtract the multiplicand.

Example: Multiply 2,736 by 999=2,736,000
2,736
2,733,264 Ans.

### To Multiply by 11.

To multiply any two figures by 11, add two figures together and place their sum between the two figures of that number.

Example: $43\times11=473$, or 4, (4+3) and 3. If the sum of the two figures exceeds 9, the left-hand figure must be increased by 1. Thus $48\times11=528$.

### To Multiply by 75.

Find cost of 428 yards at 75 cents. Take ¼ of the number of yards, 107 subtract this from the number 428-107=321 and call the remainder dollars. This is a very convenient and practical rule.

### How to Determine Results By Cancellation

1. Cancellation is the method of shortening operations by rejecting equal factors from numbers used as a divisor and the numbers used as a dividend.

2. Cancellation shortens the process of multiplication and division and is very practical in the following examples:

Illustration: Multiply 18x16x28 and divide the result by 12x7x14 and it will equal 6 6/7.

SOLUTION:

$$\frac{\cancel{18}^{3}\times 16\times\cancel{28}^{2}}{\cancel{12}_{2}\times 7\times\cancel{14}} = \frac{3\times 16}{7} = 6\tfrac{6}{7},\ \textit{Ans.}$$

Or,

$$\begin{array}{r|l} 2\ \cancel{12} & \cancel{18}\ 3 \\ 7 & 16 \\ \cancel{14} & \cancel{28}\ 2 \\ \hline 7 & 48 = 6\tfrac{6}{7},\ \textit{Ans.} \end{array}$$

### How to Estimate All Kinds of Produce, and Figure Up Wheat, Oats, Potatoes, Etc., Sold by the Bushel.

**Cancellation Method.**

Example: What will 1660 pounds of wheat cost at 80 cents a bushel?

$$\begin{array}{r|l} 3\cdot\ \cancel{60} & 1660 \\ & .\cancel{80} \\ & .4 \\ \hline 3 & 66.40 = \$22.13\tfrac{1}{3},\ \textit{Ans.} \end{array}$$

Explanation: It will be seen at a glance that the number of pounds and the price are to be multiplied together and the result divided by 60; so place 1660 and 80 on one side of the line and 60 on the other and determine the result by cancellation, as shown in the above. This principle will apply to any commodity, and is one of the best and most rapid methods in solving practical examples.

Example: What will 2849 pounds of corn cost at 36 cents per bushel.

SOLUTION:

$$\begin{array}{r|l} 7\cancel{0} & 2849 \\ & .36 \\ \hline 7 & 102.24 = \$14.60\tfrac{4}{7},\ \textit{Ans.} \end{array}$$

### How to Figure Lumber by Cancellation.

Rule.—Lumber is measured by the running foot. A foot square and one inch thick is the unit of measurement. It is easily seen that the number of pieces of lumber, multiplied by the length, and that result multiplied by the cost, and the total result divided by 12, will determine the cost of any quantity of lumber that may be desired.

**Example:** How many feet in a stick of lumber 6x8 and 18 feet long?

SOLUTION:

| | |
|---|---|
| ~~12~~ | ~~8~~ |
| ~~2~~ | 8 |
| | ~~18~~ 9 |

72 feet, *Ans.*

**Example:** What will be the cost of 10 planks 14 inches wide, 2 inches thick, 14 feet long, at $20 per thousand?

SOLUTION:

| | |
|---|---|
| 3 | ~~14~~ 7 |
| ~~6~~ | ~~2~~ |
| ~~12~~ | 14 |
| | 10 |
| | 20 |

3 | 196.00 = $6.53⅓, *Ans.*

**Example:** What will be the cost of 20 pieces 2x4, 18 feet long, at $12 per thousand?

SOLUTION:

| | |
|---|---|
| | 2 |
| | ~~4~~ |
| ~~12~~ | 18 |
| | 20 |
| | ~~12~~ |

$2.880, *Ans.*

## How to Figure up the Plastering of a Room by Cancellation.

**Rule.**—Multiply the distance around the room in feet by the height of the room in feet, and this result by the price per square yard, and divide the product by 9, because there are 9 square feet in a square yard. For the ceiling, multiply the length of the room by the width of the room in feet, and this by the price per square yard, and divide the product by 9. Add the two results, and you have the cost of plastering the room.

EXAMPLE:—What would it cost to plaster a room 18 feet wide, 22 feet long, and 9 feet high, at 20 cents per square yard?

SOLUTION:

| | | |
|---|---|---|
| ~~9~~ | 80 | ~~18~~ 2 |
| | ~~9~~ ~~9~~ | 22 |
| | 20 | 20 |

$16.00 + $8.80 = $24.80, *Ans.*

## Rapid Methods in Business Calculations.

**To Multiply Any Two Numbers Together, Each Having the Same Fractions**

Rule—1. Multiply the whole numbers together.
2. Add the two numbers together and multiply this sum by either one of the fractions.
3. Multiply the two fractions together.
4. Add the results together.

| Example: | |
|---|---|
| 12¾ | |
| 8¾ | |
| 96 | |
| 15 | |
| 9/16 | |
| 111 9/16 Ans. | |

### How to Multiply Any Mixed Numbers.

Example—Multiply 16 2/3 by 9¾

16 2/3
9 3/4

Rule—1...Multiply the whole numbers together..... 144
2. Multiply the upper whole number by the lower fraction.. 12
3. Multiply the lower whole number by the upper fraction.. 6
4. Multiply the fractions together..... ½

5. Add the four products together..... 162½ Ans.

N. B.—The middle parts should be added mentally without writing them out.

### Business Methods for Multiplying All Kinds of Mixed Numbers.

Rule—Multiply the whole numbers together, then multiply each whole number by the fraction in the other number to its nearest unit and add the products.

Note—In business it is the custom to reject fractions less than ½ in each and count one for each fraction over ½.

How much will 34¾ yards of cloth cost at 22½ cents per yard.

Solution: $34\times22=\$7.48$
$34\times\frac{1}{2}=.17$
Nearest unit, $22\times\frac{3}{4}=.16\frac{1}{2}$
$\frac{3}{4}\times\frac{1}{2}=\frac{3}{8}$

$\$7.81\frac{7}{8}=7.82$ Ans.

What is the cost of 17 dozen and 9 eggs at 12½ cents per dozen?

Solution: $17\times12=\$2.04$
$17\times\frac{1}{2}=9$ (Make the ½ a unit.)
9 eggs=¾ dozen, $12\times\frac{3}{4}=9$

$2.22 Ans.

### The Curious Figure 9.

Multiply 9 by any figure you like, and the sum of the digits of the product will be 9. Thus, $4\times9=36$; add the digits, $3+6=9$. So it goes up to 11 times $9=99$; add these, $9+9=18$, add again $8+1=9$. You will never be able to get away from the figure nine. $9\times454=4086$, add the digits and the result is 18, and 8 and $1=9$.

Again: Take a row of figures. 487,632
Reverse the order of the figures. 236,784

Subtract, 250,848

Add the digits and the result is 27, and $2+7=9$.

## Ready Reckoner

**How to Find the Price of any Number of Pounds, Yards, Pieces or Bushels.**

The first column gives the NUMBER—the top columns the Prices.

| NOS. | ½c. | ⅔c. | ¾c | 2c. | 3c. | 4c. | 5c. | 6c. | 6¼c. | .6⅔c | 7c. | 8c. | 8⅓c. | 9c. | 10c. | 11c. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | ½ | .01 | .01½ | .04 | .06 | .08 | .10 | .12 | .12½ | .13⅓ | .14 | .16 | .16⅔ | .18 | .20 | .22 |
| 3 | ¾ | .01½ | .02¼ | .06 | .09 | .12 | .15 | .18 | .18¾ | .20 | .21 | .24 | .25 | .27 | .30 | .33 |
| 4 | .01 | .02 | .03 | .08 | .12 | .16 | .20 | .24 | .25 | .26⅔ | .28 | .32 | .33⅓ | .36 | .40 | .44 |
| 5 | .01½ | .02½ | .03¾ | .10 | .15 | .20 | .25 | .30 | .31¼ | .33⅓ | .35 | .40 | .41⅔ | .45 | .50 | .55 |
| 6 | .01½ | .03 | .04½ | .12 | .18 | .24 | .30 | .36 | .37½ | .40 | .42 | .48 | .50 | .54 | .60 | .66 |
| 7 | .01¾ | .03½ | .05¼ | .14 | .21 | .28 | .35 | .42 | .43¾ | .46⅔ | .49 | .56 | .58⅓ | .63 | .70 | .77 |
| 8 | .02 | .04 | .06 | .16 | .24 | .32 | .40 | .48 | .50 | .53⅓ | .56 | .64 | .66⅔ | .72 | .80 | .88 |
| 9 | .02¼ | .04½ | .06¾ | .18 | .27 | .36 | .45 | .54 | .56¼ | .60 | .63 | .72 | .75 | .81 | .90 | .99 |
| 10 | .02½ | .05 | .07½ | .20 | .30 | .40 | .50 | .60 | .62½ | .66⅔ | .70 | .80 | .83⅓ | .90 | 1.00 | 1.10 |
| 11 | .02¾ | .05½ | .08¼ | .22 | .33 | .44 | .55 | .66 | .68¾ | .73⅓ | .77 | .88 | .91⅔ | .99 | 1.10 | 1.21 |
| 12 | .03 | .06 | .09 | .24 | .36 | .48 | .60 | .72 | .75 | .80 | .84 | .96 | 1.00 | 1.08 | 1.20 | 1.32 |
| 13 | .03¼ | .06½ | .09¾ | .26 | .39 | .52 | .65 | .78 | .81¼ | .86⅔ | .91 | 1.04 | 1.08⅓ | 1.17 | 1.30 | 1.43 |
| 14 | .03½ | .07 | .10½ | .28 | .42 | .56 | .70 | .84 | .87½ | .93⅓ | .98 | 1.12 | 1.16⅔ | 1.26 | 1.40 | 1.54 |
| 15 | .03¾ | .07½ | .11¼ | .30 | .45 | .60 | .75 | .90 | .93¾ | 1.00 | 1.05 | 1.20 | 1.25 | 1.35 | 1.50 | 1.65 |
| 16 | .04 | .08 | .12 | .32 | .48 | .64 | .80 | .96 | 1.00 | 1.06⅔ | 1.12 | 1.28 | 1.33⅓ | 1.44 | 1.60 | 1.76 |
| 17 | .04¼ | .08½ | .12¾ | .34 | .51 | .68 | .85 | 1.02 | 1.06¼ | 1.13⅓ | 1.19 | 1.36 | 1.41⅔ | 1.53 | 1.70 | 1.87 |
| 18 | .04½ | .09 | .13½ | .36 | .54 | .72 | .90 | 1.08 | 1.12½ | 1.20 | 1.26 | 1.44 | 1.50 | 1.62 | 1.80 | 1.98 |
| 19 | .04¾ | .09½ | .14¼ | .38 | .57 | .76 | .95 | 1.14 | 1.18¾ | 1.26⅔ | 1.33 | 1.52 | 1.58⅓ | 1 71 | 1.90 | 2.09 |
| 20 | .05 | .10 | .15 | .40 | .60 | .80 | 1.00 | 1.20 | 1.25 | 1.33⅓ | 1.40 | 1.60 | 1.66⅔ | 1.80 | 2.00 | 2.20 |
| 21 | .05¼ | .10½ | .15¾ | .42 | .63 | .84 | 1.05 | 1.26 | 1.31¼ | 1.40 | 1.47 | 1.68 | 1.75 | 1.89 | 2.10 | 2.31 |
| 22 | .05½ | .11 | .16½ | .44 | .66 | .88 | 1.10 | 1.32 | 1.37½ | 1.46⅔ | 1.54 | 1.76 | 1.83⅓ | 1.98 | 2.20 | 2.42 |
| 23 | .05¾ | .11½ | .17¼ | .46 | .69 | .92 | 1.15 | 1.38 | 1.43¾ | 1.53⅓ | 1.61 | 1.84 | 1.91⅔ | 2.07 | 2.30 | 2.53 |
| 24 | .06 | .12 | .18 | .48 | .72 | .96 | 1.20 | 1.44 | 1.50 | 1.60 | 1.68 | 1.92 | 2.00 | 2.16 | 2.40 | 2.64 |
| 25 | .06¼ | .12½ | .18¾ | .50 | .75 | 1.00 | 1.25 | 1.50 | 1.56¼ | 1.66⅔ | 1.75 | 2.00 | 2.08⅓ | 2.25 | 2.50 | 2.75 |
| 26 | .06½ | .13 | .19½ | .52 | .78 | 1.04 | 1.30 | 1.56 | 1.62½ | 1.73⅓ | 1.82 | 2.08 | 2.16⅔ | 2.34 | 2.60 | 2.86 |
| 27 | .06¾ | .13½ | .20¼ | .54 | .81 | 1.08 | 1.35 | 1.62 | 1.68¾ | 1.80 | 1.89 | 2.16 | 2.25 | 2.43 | 2.70 | 2.97 |
| 28 | .07 | .14 | .21 | .56 | .84 | 1.12 | 1.40 | 1.68 | 1.75 | 1.86⅔ | 1.96 | 2.24 | 2.33⅓ | 2.52 | 2.80 | 3.08 |
| 29 | .07¼ | .14½ | .21¾ | .58 | .87 | 1.16 | 1.45 | 1.74 | 1.81¼ | 1.93⅓ | 2.03 | 2.32 | 2.41⅔ | 2.61 | 2.90 | 3.19 |
| 30 | .07½ | .15 | .22½ | .60 | .90 | 1.20 | 1.50 | 1.80 | 1.87½ | 2.00 | 2.10 | 2.40 | 2.50 | 2.70 | 3.00 | 3.30 |
| 31 | .07¾ | .15½ | .23¼ | .62 | .93 | 1.24 | 1.55 | 1.86 | 1.93¾ | 2.06⅔ | 2.17 | 2.48 | 2.58⅓ | 2.79 | 3.10 | 3.41 |
| 32 | .08 | .16 | .24 | .64 | .96 | 1.28 | 1.60 | 1.92 | 2.00 | 2.13⅓ | 2.24 | 2.56 | 2.66⅔ | 2.88 | 3.20 | 3.52 |
| 33 | .08¼ | .16½ | .24¾ | .66 | .99 | 1.32 | 1.65 | 1.98 | 2.06¼ | 2.20 | 2.31 | 2.64 | 2.75 | 2.97 | 3.30 | 3.63 |
| 34 | .08½ | .17 | .25½ | .68 | 1.02 | 1.36 | 1.70 | 2.04 | 2.12½ | 2.26⅔ | 2.38 | 2.72 | 2.83⅓ | 3.06 | 3.40 | 3.74 |
| 35 | .08¾ | .17½ | .26¼ | .70 | 1.05 | 1.40 | 1.75 | 2.10 | 2.18¾ | 2.33⅓ | 2.45 | 2.80 | 2.91⅔ | 3.15 | 3.50 | 3.85 |
| 36 | .09 | .18 | .27 | .72 | 1.08 | 1.44 | 1.80 | 2.16 | 2.25 | 2.40 | 2.52 | 2.88 | 3.00 | 3.24 | 3.60 | 3.96 |
| 37 | .09¼ | .18½ | .27¾ | .74 | 1.11 | 1.48 | 1.85 | 2.22 | 2.31¼ | 2.46⅔ | 2.59 | 2.96 | 3.08⅓ | 3.33 | 3.70 | 4.07 |
| 38 | .09½ | .19 | .28½ | .76 | 1.14 | 1.52 | 1.90 | 2.28 | 2.37½ | 2.53⅓ | 2.66 | 3.04 | 3.16⅔ | 3.42 | 3.80 | 4.18 |
| 39 | .09¾ | .19½ | .29¼ | .78 | 1.17 | 1.56 | 1 95 | 2.34 | 2.43¾ | 2.60 | 2.73 | 3.12 | 3.25 | 3.51 | 3.90 | 4.29 |
| 40 | .10 | .20 | .30 | .80 | 1.20 | 1.60 | 2.00 | 2.40 | 2.50 | 2.66⅔ | 2.80 | 3.20 | 3.33⅓ | 3.60 | 4.00 | 4.40 |
| 41 | .10¼ | .20½ | .30¾ | .82 | 1.23 | 1.64 | 2.05 | 2.46 | 2.56¼ | 2.73⅓ | 2.87 | 3.28 | 3.41⅔ | 3.69 | 4.10 | 4.51 |
| 42 | .10½ | .21 | .31½ | .84 | 1.26 | 1.68 | 2.10 | 2.52 | 2.62½ | 2.80 | 2.94 | 3.36 | 3.50 | 3.78 | 4.20 | 4.62 |
| 43 | .10¾ | .21½ | .32¼ | .86 | 1.29 | 1.72 | 2.15 | 2.58 | 2.68¾ | 2.86⅔ | 3.01 | 3.44 | 3.58⅓ | 3.87 | 4.30 | 4.73 |
| 44 | .11 | .22 | .33 | .88 | 1.32 | 1.76 | 2.20 | 2.64 | 2.75 | 2.93⅓ | 3.08 | 3.52 | 3.66⅔ | 3.96 | 4.40 | 4.84 |
| 45 | .11¼ | .22½ | .33¾ | .90 | 1.35 | 1.80 | 2.25 | 2.70 | 2.81¼ | 3.00 | 3.15 | 3.60 | 3.75 | 4.05 | 4.50 | 4.95 |
| 46 | .11½ | .23 | .34½ | .92 | 1.38 | 1.84 | 2.30 | 2.76 | 2.87½ | 3.06⅔ | 3.22 | 3.68 | 3.83⅓ | 4.14 | 4.60 | 5.06 |
| 47 | .11¾ | .23½ | .35¼ | .94 | 1.41 | 1.88 | 2.35 | 2.82 | 2.93¾ | 3.13⅓ | 3.29 | 3.76 | 3.91⅔ | 4.23 | 4.70 | 5.17 |
| 48 | .12 | .24 | .36 | .96 | 1.44 | 1.92 | 2.40 | 2.88 | 3.00 | 3.20 | 3.36 | 3.84 | 4.00 | 4.32 | 4.80 | 5.28 |
| 49 | .12¼ | .24½ | .36¾ | .98 | 1.47 | 1.96 | 2.45 | 2.94 | 3.06¼ | 3.26⅔ | 3.43 | 3.92 | 4.08⅓ | 4.41 | 4.90 | 5.39 |
| 50 | .12½ | .25 | .37½ | 1.00 | 1.50 | 2.00 | 2.50 | 3.00 | 3.12½ | 3.33⅓ | 3.50 | 4.00 | 4.16⅔ | 4.50 | 5.00 | 5.50 |
| 60 | .15 | .30 | .45 | 1.20 | 1.80 | 2.40 | 3.00 | 3.60 | 3.75 | 4.00 | 4.20 | 4.80 | 5.00 | 5.40 | 6.00 | 6.60 |
| 70 | .17½ | .35 | .52½ | 1.40 | 2.10 | 2.80 | 3.50 | 4.20 | 4.37½ | 4.66⅔ | 4.90 | 5.60 | 5.83⅓ | 6.30 | 7.00 | 7.70 |
| 80 | .20 | .40 | .60 | 1.60 | 2.40 | 3.20 | 4.00 | 4.80 | 5.00 | 5.33⅓ | 5.60 | 6.40 | 6.66⅔ | 7.20 | 8.00 | 8.80 |
| 90 | .22½ | .45 | .67½ | 1.80 | 2.70 | 3.60 | 4.50 | 5.40 | 5.62½ | 6.00 | 6.30 | 7.20 | 7.50 | 8.10 | 9.00 | 9.90 |
| 100 | .25 | .50 | .75 | 2.00 | 3.00 | 4.00 | 5.00 | 6.00 | 6.25 | 6.66⅔ | 7.00 | 8.00 | 8.33⅓ | 9.00 | 10.00 | 11.00 |

## Ready Reckoner—Continued

The first column gives the NUMBER—the top columns the PRICES.

| Nos. | 12c. | 12½c. | 13c. | 14c. | 15c. | 16c. | 16⅔c. | 17c. | 18c. | 18¾c. | 19c. | 20c. | 21c. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | .24 | .25 | .26 | .28 | .30 | .32 | .33⅓ | .34 | 36 | .37½ | .38 | .40 | .42 |
| 3 | .36 | .37½ | .39 | .42 | .45 | .48 | .50 | .51 | .54 | .56¼ | .57 | .60 | .63 |
| 4 | .48 | .50 | .52 | .56 | .60 | .64 | .66⅔ | .68 | .72 | .75 | .76 | .80 | .84 |
| 5 | .60 | .62½ | .65 | .70 | .75 | .80 | .83⅓ | .85 | .90 | .93¾ | .95 | 1.00 | 1.05 |
| 6 | .72 | .75 | .78 | .84 | .90 | .96 | 1 00 | 1.02 | 1.08 | 1 12½ | 1.14 | 1.20 | 1.26 |
| 7 | .84 | .87½ | .91 | .98 | 1.05 | 1.12 | 1.16⅔ | 1.19 | 1.26 | 1 31¼ | 1.33 | 1.40 | 1.47 |
| 8 | .96 | 1.00 | 1.04 | 1.12 | 1.20 | 1.28 | 1.33⅓ | 1.36 | 1.44 | 1.50 | 1.52 | 1 60 | 1.68 |
| 9 | 1.08 | 1.12½ | 1.17 | 1.26 | 1.35 | 1.44 | 1.50 | 1.53 | 1.62 | 1.68¾ | 1.71 | 1.80 | 1.89 |
| 10 | 1.20 | 1.25 | 1.30 | 1.40 | 1.50 | 1.60 | 1.66⅔ | 1.70 | 1.80 | 1 87½ | 1.90 | 2 00 | 2.10 |
| 11 | 1.32 | 1.37½ | 1.43 | 1.54 | 1.65 | 1.76 | 1.83⅓ | 1.87 | 1.98 | 2 06¼ | 2.09 | 2 20 | 2.31 |
| 12 | 1.44 | 1.50 | 1.56 | 1.68 | 1.80 | 1.92 | 2 00 | 2.04 | 2.16 | 2 25 | 2.28 | 2.40 | 2.52 |
| 13 | 1.56 | 1.62½ | 1.69 | 1.82 | 1.95 | 2 08 | 2.16⅔ | 2.21 | 2 34 | 2 43¾ | 2.47 | 2 60 | 2.73 |
| 14 | 1.68 | 1.75 | 1.82 | 1.96 | 2.10 | 2.24 | 2.33⅓ | 2.38 | 2.52 | 2 62½ | 2.66 | 2.80 | 2.94 |
| 15 | 1.80 | 1.87½ | 1.95 | 2.10 | 2 25 | 2.40 | 2.50 | 2 55 | 2.70 | 2 81¼ | 2.85 | 3.00 | 3.15 |
| 16 | 1.92 | 2 00 | 2.08 | 2.24 | 2.40 | 2.56 | 2.66⅔ | 2.72 | 2.88 | 3 00 | 3 04 | 3.20 | 3.36 |
| 17 | 2.04 | 2.12½ | 2.21 | 2.38 | 2.55 | 2.72 | 2.83⅓ | 2.89 | 3.06 | 3.18¾ | 3.23 | 3.40 | 3.57 |
| 18 | 2.16 | 2.25 | 2.34 | 2.52 | 2.70 | 2.88 | 3.00 | 3.06 | 3.24 | 3.37½ | 3.42 | 3.60 | 3.78 |
| 19 | 2.28 | 2.37½ | 2.47 | 2.66 | 2.85 | 3.04 | 3.16⅔ | 3.23 | 3.42 | 3.56¼ | 3.61 | 3.80 | 3.99 |
| 20 | 2.40 | 2.50 | 2.60 | 2 80 | 3.00 | 3.20 | 3 33⅓ | 3.40 | 3 60 | 3 75 | 3.80 | 4.00 | 4 20 |
| 21 | 2.52 | 2.62½ | 2.73 | 2.94 | 3.15 | 3.36 | 3.50 | 3.57 | 3.78 | 3.93¾ | 3.99 | 4.20 | 4.41 |
| 22 | 2.64 | 2.75 | 2.86 | 3.08 | 3.30 | 3 52 | 3.66⅔ | 3.74 | 3.96 | 4.12½ | 4.18 | 4.40 | 4.62 |
| 23 | 2 76 | 2.87½ | 2.99 | 3.22 | 3.45 | 3 68 | 3 83⅓ | 3.91 | 4.14 | 4 31¼ | 4.37 | 4.60 | 4.83 |
| 24 | 2.88 | 3.00 | 3.12 | 3.36 | 3.60 | 3.84 | 4.00 | 4 08 | 4.32 | 4 50 | 4.56 | 4.80 | 5 04 |
| 25 | 3.00 | 3.12½ | 3.25 | 3.50 | 3.75 | 4.00 | 4.16⅔ | 4 25 | 4.50 | 4.68¾ | 4.75 | 5.00 | 5.25 |
| 26 | 3.12 | 3.25 | 3.38 | 3.64 | 3.90 | 4 16 | 4.33⅓ | 4.42 | 4.68 | 4 87½ | 4.94 | 5.20 | 5.46 |
| 27 | 3 24 | 3.37½ | 3.51 | 3.78 | 4.05 | 4 32 | 4 50 | 4 59 | 4.86 | 5.06¼ | 5.13 | 5.40 | 5.67 |
| 28 | 3.36 | 3.50 | 3.64 | 3.92 | 4.20 | 4.48 | 4.66⅔ | 4.76 | 5.04 | 5.25 | 5.32 | 5.60 | 5.88 |
| 29 | 3.48 | 3.62½ | 3.77 | 4.06 | 4.35 | 4.64 | 4.83⅓ | 4.93 | 5.22 | 5.43¾ | 5.51 | 5.80 | 6.09 |
| 30 | 3.60 | 3.75 | 3.90 | 4.20 | 4.50 | 4.80 | 5.00 | 5.10 | 5.40 | 5 62½ | 5.70 | 6.00 | 6 30 |
| 31 | 3 72 | 3.87½ | 4.03 | 4.34 | 4.65 | 4.96 | 5 16⅔ | 5 27 | 5.58 | 5 81¼ | 5.89 | 6.20 | 6.51 |
| 32 | 3 84 | 4.00 | 4.16 | 4 48 | 4.80 | 5.12 | 5 33⅓ | 5 44 | 5 76 | 6 00 | 6.08 | 6 40 | 6.72 |
| 33 | 3.96 | 4.12½ | 4.29 | 4.62 | 4.95 | 5.28 | 5.50 | 5 61 | 5.94 | 6.18¾ | 6.27 | 6.60 | 6.93 |
| 34 | 4.08 | 4 25 | 4.42 | 4.76 | 5.10 | 5.44 | 5.66⅔ | 5.78 | 6.12 | 6 37½ | 6.46 | 6.80 | 7.14 |
| 35 | 4.20 | 4 37½ | 4.55 | 4.90 | 5.25 | 5 60 | 5 83⅓ | 5.95 | 6.30 | 6 56¼ | 6.65 | 7.00 | 7.35 |
| 36 | 4.32 | 4.50 | 4.68 | 5.04 | 5.40 | 5.76 | 6.00 | 6.12 | 6.48 | 6 75 | 6.84 | 7.20 | 7 56 |
| 37 | 4.44 | 4.62½ | 4.81 | 5.18 | 5.55 | 5 92 | 6.16⅔ | 6.29 | 6.66 | 6 93¾ | 7.03 | 7.40 | 7.77 |
| 38 | 4 56 | 4.75 | 4.94 | 5.32 | 5.70 | 6.08 | 6.33⅓ | 6 46 | 6 84 | 7.12½ | 7.22 | 7.60 | 7.98 |
| 39 | 4.68 | 4.87½ | 5.07 | 5.46 | 5.85 | 6.24 | 6.50 | 6 53 | 7 02 | 7 31¼ | 7.41 | 7.80 | 8.19 |
| 40 | 4 80 | 5.00 | 5 20 | 5.60 | 6.00 | 6.40 | 6.66⅔ | 6 80 | 7.20 | 7 50 | 7.60 | 8 00 | 8 40 |
| 41 | 4.92 | 5.12½ | 5 33 | 5.74 | 6.15 | 6.56 | 6.83⅓ | 6.97 | 7.38 | 7.68¾ | 7.79 | 8.20 | 8.61 |
| 42 | 5.04 | 5.25 | 5.46 | 5.88 | 6.30 | 6 72 | 7.00 | 7.14 | 7.56 | 7.87½ | 7.98 | 8.40 | 8.82 |
| 43 | 5 16 | 5 37½ | 5.59 | 6.02 | 6.45 | 6.88 | 7.16⅔ | 7.31 | 7.74 | 8.06¼ | 8.17 | 8.60 | 9.03 |
| 44 | 5.28 | 5.50 | 5.72 | 6.16 | 6.60 | 7 04 | 7.33⅓ | 7.48 | 7.92 | 8.25 | 8.36 | 8.80 | 9.24 |
| 45 | 5 40 | 5.62½ | 5 85 | 6.30 | 6.75 | 7.20 | 7.50 | 7.65 | 8.10 | 8.43¾ | 8.55 | 9.00 | 9.45 |
| 46 | 5.52 | 5.75 | 5.98 | 6.44 | 6.90 | 7.36 | 7.66⅔ | 7.82 | 8.28 | 8 62½ | 8.74 | 9.20 | 9.66 |
| 47 | 5.64 | 5.87½ | 6.11 | 6.58 | 7.05 | 7.52 | 7.83⅓ | 7 99 | 8.46 | 8.81¼ | 8.93 | 9.40 | 9.87 |
| 48 | 5.76 | 6 00 | 6.24 | 6.72 | 7.20 | 7.68 | 8.00 | 8.16 | 8 64 | 9.00 | 9.12 | 9.60 | 10.08 |
| 49 | 5 88 | 6.12½ | 6.37 | 6.86 | 7.35 | 7.84 | 8.16⅔ | 8.33 | 8.82 | 9.18¾ | 9.31 | 9.80 | 10.29 |
| 50 | 6.00 | 6.25 | 6.50 | 7.00 | 7.50 | 8.00 | 8.33⅓ | 8 50 | 9.00 | 9.37½ | 9.50 | 10.00 | 10.50 |
| 60 | 7.20 | 7.50 | 7.80 | 8 40 | 9.00 | 9.60 | 10.00 | 10.20 | 10.80 | 11.25 | 11.40 | 12.00 | 12.60 |
| 70 | 8.40 | 8 75 | 9.10 | 9.80 | 10.50 | 11 20 | 11.66⅔ | 11.90 | 12.60 | 13.12½ | 13.30 | 14.00 | 14.70 |
| 80 | 9.60 | 10.00 | 10.40 | 11.20 | 12.00 | 12.80 | 13.33⅓ | 13.60 | 14.40 | 15.00 | 15.20 | 16.00 | 16.80 |
| 90 | 10 80 | 11.25 | 11.70 | 12.60 | 13.50 | 14.40 | 15.00 | 15.30 | 16.20 | 16.87½ | 17.10 | 18.00 | 18.90 |
| 100 | 12.00 | 12.50 | 13.00 | 14.00 | 15.00 | 16.00 | 16.66⅔ | 17.00 | 18.00 | 18.75 | 19.00 | 20.00 | 21.00 |

## Ready Reckoner—Continued

The first column gives the NUMBER—the top columns the PRICES.

| Nos. | 22c. | 23c. | 24c. | 25c. | 2 c. | 27c. | 28c. | 29c. | 30c. | 31c. | 32c. | 33c. | 33⅓c. | 34c. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | .44 | .46 | .48 | .50 | .52 | .54 | .56 | .58 | .60 | .62 | .64 | .66 | .66⅔ | .68 |
| 3 | .66 | .69 | .72 | .75 | .78 | .81 | .84 | .87 | .90 | .93 | .96 | .99 | 1.00 | 1.02 |
| 4 | .88 | .92 | .96 | 1.00 | 1.04 | 1.08 | 1.12 | 1.16 | 1.20 | 1.24 | 1.28 | 1.32 | 1.33⅓ | 1.36 |
| 5 | 1.10 | 1.15 | 1.20 | 1.25 | 1.30 | 1.35 | 1.40 | 1.45 | 1.50 | 1.55 | 1.60 | 1.65 | 1.66⅔ | 1.70 |
| 6 | 1.32 | 1.38 | 1.44 | 1.50 | 1.56 | 1.62 | 1.68 | 1.74 | 1.80 | 1.86 | 1.92 | 1.98 | 2.00 | 2.04 |
| 7 | 1.54 | 1.61 | 1.68 | 1.75 | 1.82 | 1.89 | 1.96 | 2.03 | 2.10 | 2.17 | 2.24 | 2.31 | 2.33⅓ | 2.38 |
| 8 | 1.76 | 1.84 | 1.92 | 2.00 | 2.08 | 2.16 | 2.24 | 2.32 | 2.40 | 2.48 | 2.56 | 2.64 | 2.66⅔ | 2.72 |
| 9 | 1.98 | 2.07 | 2.16 | 2.25 | 2.34 | 2.43 | 2.52 | 2.61 | 2.70 | 2.79 | 2.88 | 2.97 | 3.00 | 3.06 |
| 10 | 2.20 | 2.30 | 2.40 | 2.50 | 2.60 | 2.70 | 2.80 | 2.90 | 3.00 | 3.10 | 3.20 | 3.30 | 3.33⅓ | 3.40 |
| 11 | 2.42 | 2.53 | 2.64 | 2.75 | 2.86 | 2.97 | 3.08 | 3.19 | 3.30 | 3.41 | 3.52 | 3.63 | 3.66⅔ | 3.74 |
| 12 | 2.64 | 2.76 | 2.88 | 3.00 | 3.12 | 3.24 | 3.36 | 3.48 | 3.60 | 3.72 | 3.84 | 3.96 | 4.00 | 4.08 |
| 13 | 2.86 | 2.99 | 3.12 | 3.25 | 3.38 | 3.51 | 3.64 | 3.77 | 3.90 | 4.03 | 4.16 | 4.29 | 4.33⅓ | 4.42 |
| 14 | 3.08 | 3.22 | 3.36 | 3.50 | 3.64 | 3.78 | 3.92 | 4.06 | 4.20 | 4.34 | 4.48 | 4.62 | 4.66⅔ | 4.76 |
| 15 | 3.30 | 3.45 | 3.60 | 3.75 | 3.90 | 4.05 | 4.20 | 4.35 | 4.50 | 4.65 | 4.80 | 4.95 | 5.00 | 5.10 |
| 16 | 3.52 | 3.68 | 3.84 | 4.00 | 4.16 | 4.32 | 4.48 | 4.64 | 4.80 | 4.96 | 5.12 | 5.28 | 5.33⅓ | 5.44 |
| 17 | 3.74 | 3.91 | 4.08 | 4.25 | 4.42 | 4.59 | 4.76 | 4.93 | 5.10 | 5.27 | 5.44 | 5.61 | 5.66⅔ | 5.78 |
| 18 | 3.96 | 4.14 | 4.32 | 4.50 | 4.68 | 4.86 | 5.04 | 5.22 | 5.40 | 5.58 | 5.76 | 5.94 | 6.00 | 6.12 |
| 19 | 4.18 | 4.37 | 4.56 | 4.75 | 4.94 | 5.13 | 5.32 | 5.51 | 5.70 | 5.89 | 6.08 | 6.27 | 6.33⅓ | 6.46 |
| 20 | 4.40 | 4.60 | 4.80 | 5.00 | 5.20 | 5.40 | 5.60 | 5.80 | 6.00 | 6.20 | 6.40 | 6.60 | 6.66⅔ | 6.80 |
| 21 | 4.62 | 4.83 | 5.04 | 5.25 | 5.46 | 5.67 | 5.88 | 6.09 | 6.30 | 6.51 | 6.72 | 6.93 | 7.00 | 7.14 |
| 22 | 4.84 | 5.06 | 5.28 | 5.50 | 5.72 | 5.94 | 6.16 | 6.38 | 6.60 | 6.82 | 7.04 | 7.26 | 7.33⅓ | 7.48 |
| 23 | 5.06 | 5.29 | 5.52 | 5.75 | 5.98 | 6.21 | 6.44 | 6.67 | 6.90 | 7.13 | 7.36 | 7.59 | 7.66⅔ | 7.82 |
| 24 | 5.28 | 5.52 | 5.76 | 6.00 | 6.24 | 6.48 | 6.72 | 6.96 | 7.20 | 7.44 | 7.68 | 7.92 | 8.00 | 8.16 |
| 25 | 5.50 | 5.75 | 6.00 | 6.25 | 6.50 | 6.75 | 7.00 | 7.25 | 7.50 | 7.75 | 8.00 | 8.25 | 8.33⅓ | 8.50 |
| 26 | 5.72 | 5.98 | 6.24 | 6.50 | 6.76 | 7.02 | 7.28 | 7.54 | 7.80 | 8.06 | 8.32 | 8.58 | 8.66⅔ | 8.84 |
| 27 | 5.94 | 6.21 | 6.48 | 6.75 | 7.02 | 7.29 | 7.56 | 7.83 | 8.10 | 8.37 | 8.64 | 8.91 | 9.00 | 9.18 |
| 28 | 6.16 | 6.44 | 6.72 | 7.00 | 7.28 | 7.56 | 7.84 | 8.12 | 8.40 | 8.68 | 8.96 | 9.24 | 9.33⅓ | 9.52 |
| 29 | 6.38 | 6.67 | 6.96 | 7.25 | 7.54 | 7.83 | 8.12 | 8.41 | 8.70 | 8.99 | 9.28 | 9.57 | 9.66⅔ | 9.86 |
| 30 | 6.60 | 6.90 | 7.20 | 7.50 | 7.80 | 8.10 | 8.40 | 8.70 | 9.00 | 9.30 | 9.60 | 9.90 | 10.00 | 10.20 |
| 31 | 6.82 | 7.13 | 7.44 | 7.75 | 8.06 | 8.37 | 8.68 | 8.99 | 9.30 | 9.61 | 9.92 | 10.23 | 10.33⅓ | 10.54 |
| 32 | 7.04 | 7.36 | 7.68 | 8.00 | 8.32 | 8.64 | 8.96 | 9.28 | 9.60 | 9.92 | 10.24 | 10.56 | 10.66⅔ | 10.88 |
| 33 | 7.26 | 7.59 | 7.92 | 8.25 | 8.58 | 8.91 | 9.24 | 9.57 | 9.90 | 10.23 | 10.56 | 10.89 | 11.00 | 11.22 |
| 34 | 7.48 | 7.82 | 8.16 | 8.50 | 8.84 | 9.18 | 9.52 | 9.86 | 10.20 | 10.54 | 10.88 | 11.22 | 11.33⅓ | 11.56 |
| 35 | 7.70 | 8.05 | 8.40 | 8.75 | 9.10 | 9.45 | 9.80 | 10.15 | 10.50 | 10.85 | 11.20 | 11.55 | 11.66⅔ | 11.90 |
| 36 | 7.92 | 8.28 | 8.64 | 9.00 | 9.36 | 9.72 | 10.08 | 10.44 | 10.80 | 11.16 | 11.52 | 11.88 | 12.00 | 12.24 |
| 37 | 8.14 | 8.51 | 8.88 | 9.25 | 9.62 | 9.99 | 10.36 | 10.73 | 11.10 | 11.47 | 11.84 | 12.21 | 12.33⅓ | 12.58 |
| 38 | 8.36 | 8.74 | 9.12 | 9.50 | 9.88 | 10.26 | 10.64 | 11.02 | 11.40 | 11.78 | 12.16 | 12.54 | 12.66⅔ | 12.92 |
| 39 | 8.58 | 8.97 | 9.36 | 9.75 | 10.14 | 10.53 | 10.92 | 11.31 | 11.70 | 12.09 | 12.48 | 12.87 | 13.00 | 13.26 |
| 40 | 8.80 | 9.20 | 9.60 | 10.00 | 10.40 | 10.80 | 11.20 | 11.60 | 12.00 | 12.40 | 12.80 | 13.20 | 13.33⅓ | 13.60 |
| 41 | 9.02 | 9.43 | 9.84 | 10.25 | 10.66 | 11.07 | 11.48 | 11.89 | 12.30 | 12.71 | 13.12 | 13.53 | 13.66⅔ | 13.94 |
| 42 | 9.24 | 9.66 | 10.08 | 10.50 | 10.92 | 11.34 | 11.76 | 12.18 | 12.60 | 13.02 | 13.44 | 13.86 | 14.00 | 14.28 |
| 43 | 9.46 | 9.89 | 10.32 | 10.75 | 11.18 | 11.61 | 12.04 | 12.47 | 12.90 | 13.33 | 13.76 | 14.19 | 14.33⅓ | 14.62 |
| 44 | 9.68 | 10.12 | 10.56 | 11.00 | 11.44 | 11.88 | 12.32 | 12.76 | 13.20 | 13.64 | 14.08 | 14.52 | 14.66⅔ | 14.96 |
| 45 | 9.90 | 10.35 | 10.80 | 11.25 | 11.70 | 12.15 | 12.60 | 13.05 | 13.50 | 13.95 | 14.40 | 14.85 | 15.00 | 15.30 |
| 46 | 10.12 | 10.58 | 11.04 | 11.50 | 11.96 | 12.42 | 12.88 | 13.34 | 13.80 | 14.26 | 14.72 | 15.18 | 15.33⅓ | 15.64 |
| 47 | 10.34 | 10.81 | 11.28 | 11.75 | 12.22 | 12.69 | 13.16 | 13.63 | 14.10 | 14.57 | 15.04 | 15.51 | 15.66⅔ | 15.98 |
| 48 | 10.56 | 11.04 | 11.52 | 12.00 | 12.48 | 12.96 | 13.44 | 13.92 | 14.40 | 14.88 | 15.36 | 15.84 | 16.00 | 16.32 |
| 49 | 10.78 | 11.27 | 11.76 | 12.25 | 12.74 | 13.23 | 13.72 | 14.21 | 14.70 | 15.19 | 15.68 | 16.17 | 16.33⅓ | 16.66 |
| 50 | 11.00 | 11.50 | 12.00 | 12.50 | 13.00 | 13.50 | 14.00 | 14.50 | 15.00 | 15.50 | 16.00 | 16.50 | 16.66⅔ | 17.00 |
| 60 | 13.20 | 13.80 | 14.40 | 15.00 | 15.60 | 16.20 | 16.80 | 17.40 | 18.00 | 18.60 | 19.20 | 19.80 | 20.00 | 20.40 |
| 70 | 15.40 | 16.10 | 16.80 | 17.50 | 18.20 | 18.90 | 19.60 | 20.30 | 21.00 | 21.70 | 22.40 | 23.10 | 23.33⅓ | 23.80 |
| 80 | 17.60 | 18.40 | 19.20 | 20.00 | 20.80 | 21.60 | 22.40 | 23.20 | 24.00 | 24.80 | 25.60 | 26.40 | 26.66⅔ | 27.20 |
| 90 | 19.80 | 20.70 | 21.60 | 22.50 | 23.40 | 24.30 | 25.20 | 26.10 | 27.00 | 27.90 | 28.80 | 29.70 | 30.00 | 30.60 |
| 100 | 22.00 | 23.00 | 24.00 | 25.00 | 26.00 | 27.00 | 28.00 | 29.00 | 30.00 | 31.00 | 32.00 | 33.00 | 33.33⅓ | 34.00 |

## Ready Reckoner—Continued

The first column gives the NUMBER—the top columns the PRICES

| Nos. | 35c. | 36c. | 37c. | 37½c. | 38c. | 39c. | 40c. | 41c. | 42c. | 43c. | 44c. | 45c | 46c. | 47c. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | .70 | .72 | .74 | .75 | .76 | .78 | .80 | .82 | .84 | .86 | .88 | .90 | .92 | .94 |
| 3 | 1.05 | 1.08 | 1.11 | 1.12½ | 1.14 | 1.17 | 1.20 | 1.23 | 1.26 | 1.29 | 1.32 | 1.35 | 1.38 | 1.41 |
| 4 | 1.40 | 1.44 | 1.48 | 1.50 | 1.52 | 1.56 | 1.60 | 1.64 | 1.68 | 1.72 | 1.76 | 1.80 | 1.84 | 1.88 |
| 5 | 1.75 | 1.80 | 1.85 | 1.87½ | 1.90 | 1.95 | 2.00 | 2.05 | 2.10 | 2.15 | 2.20 | 2.25 | 2.30 | 3.35 |
| 6 | 2.10 | 2.16 | 2.22 | 2.25 | 2.28 | 2.34 | 2.40 | 2.46 | 2.52 | 2.58 | 2.64 | 2.70 | 2.76 | 2.82 |
| 7 | 2.45 | 2.52 | 2.59 | 2.62½ | 2.66 | 2.73 | 2.80 | 2.87 | 2.94 | 3.01 | 3.08 | 3.15 | 3.22 | 3.29 |
| 8 | 2.80 | 2.88 | 2.96 | 3.00 | 3.04 | 3.12 | 3.20 | 3.28 | 3.36 | 3.44 | 3.52 | 3.60 | 3.68 | 3.76 |
| 9 | 3.15 | 3.24 | 3.33 | 3.37½ | 3.42 | 3.51 | 3.60 | 3.69 | 3.78 | 3.87 | 3.96 | 4.05 | 4.14 | 4.23 |
| 10 | 3.50 | 3.60 | 3.70 | 3.75 | 3.80 | 3.90 | 4.00 | 4.10 | 4.20 | 4.30 | 4.40 | 4.50 | 4.60 | 4.70 |
| 11 | 3.85 | 3.96 | 4.07 | 4.12½ | 4.18 | 4.29 | 4 40 | 4.51 | 4.62 | 4.73 | 4.84 | 4.95 | 5.06 | 5.17 |
| 12 | 4.20 | 4.32 | 4.44 | 4.50 | 4.56 | 4.68 | 4.80 | 4.92 | 5.04 | 5.16 | 5.28 | 5.40 | 5.52 | 5.64 |
| 13 | 4.55 | 4.68 | 4.81 | 4.87½ | 4.94 | 5.07 | 5.20 | 5.33 | 5.46 | 5.59 | 5.72 | 5.85 | 5.98 | 6.11 |
| 14 | 4.90 | 5.04 | 5.18 | 5.25 | 5.32 | 5.46 | 5.60 | 5.74 | 5.88 | 6.02 | 6.16 | 6.30 | 6.44 | 6.58 |
| 15 | 5.25 | 5.40 | 5.55 | 5.62½ | 5.70 | 5.85 | 6.00 | 6.15 | 6.30 | 6.45 | 6.60 | 6.75 | 6.90 | 7.05 |
| 16 | 5.60 | 5.76 | 5.92 | 6.00 | 6.08 | 6.24 | 6.40 | 6.56 | 6.72 | 6.88 | 7.04 | 7.20 | 7.36 | 7.52 |
| 17 | 5.95 | 6.12 | 6.29 | 6.37½ | 6.46 | 6.63 | 6.80 | 6.97 | 7.14 | 7.31 | 7.48 | 7.65 | 7.82 | 7.99 |
| 18 | 6.30 | 6.48 | 6.66 | 6.75 | 6.84 | 7.02 | 7.20 | 7.38 | 7.56 | 7.74 | 7.92 | 8.10 | 8.28 | 8.46 |
| 19 | 6.65 | 6.84 | 7.03 | 7.12½ | 7.22 | 7.41 | 7.60 | 7.79 | 7.98 | 8.17 | 8.36 | 8.55 | 8.74 | 8.93 |
| 20 | 7.00 | 7.20 | 7.40 | 7.50 | 7.60 | 7.80 | 8.00 | 8.20 | 8.40 | 8.60 | 8.80 | 9.00 | 9.20 | 9.40 |
| 21 | 7.35 | 7.56 | 7.77 | 7.87½ | 7.98 | 8.19 | 8.40 | 8.61 | 8.82 | 9.03 | 9.24 | 9.45 | 9.66 | 9.87 |
| 22 | 7.70 | 7.92 | 8.14 | 8.25 | 8.36 | 8.58 | 8.80 | 9.02 | 9.24 | 9.46 | 9.68 | 9.90 | 10.12 | 10.34 |
| 23 | 8.05 | 8.28 | 8.51 | 8.62½ | 8.74 | 8.97 | 9.20 | 9.43 | 9.66 | 9.89 | 10.12 | 10.35 | 10.58 | 10.81 |
| 24 | 8.40 | 8.64 | 8.88 | 9.00 | 9.12 | 9.36 | 6.60 | 9.84 | 10.08 | 10.32 | 10.56 | 10.80 | 11.04 | 11.28 |
| 25 | 8.75 | 9.00 | 9.25 | 9.37½ | 9.50 | 9.75 | 10.00 | 10.25 | 10.50 | 10.75 | 11.00 | 11.25 | 11.50 | 11.75 |
| 26 | 9.10 | 9.36 | 9.62 | 9.75 | 9.88 | 10.14 | 10.40 | 10.66 | 10.92 | 11.18 | 11.44 | 11.70 | 11.96 | 12.22 |
| 27 | 9.45 | 9.72 | 9.99 | 10.12½ | 10.26 | 10.53 | 10.80 | 11.07 | 11.34 | 11.61 | 11.88 | 12.15 | 12.42 | 12.69 |
| 28 | 9.80 | 10.08 | 10.36 | 10.50 | 10.64 | 10.92 | 11.20 | 11.48 | 11.76 | 12.04 | 12.32 | 12.60 | 12.88 | 13.16 |
| 29 | 10.15 | 10.44 | 10.73 | 10.87½ | 11.02 | 11.31 | 11 60 | 11.89 | 12.18 | 12.47 | 12.76 | 13.05 | 13.34 | 13.63 |
| 30 | 10.50 | 10.80 | 11.10 | 11.25 | 11.40 | 11.70 | 12.00 | 12.30 | 12.60 | 12.90 | 13.20 | 13.50 | 13.80 | 14.10 |
| 31 | 10.85 | 11.16 | 11.47 | 11.62½ | 11.78 | 12.09 | 12.40 | 12.71 | 13.02 | 13.33 | 13.64 | 13.95 | 14.26 | 14.57 |
| 32 | 11.20 | 11.52 | 11.84 | 12.00 | 12.16 | 12.48 | 12.80 | 13.12 | 13.44 | 13.76 | 14.08 | 14.40 | 14.72 | 15.04 |
| 33 | 11.55 | 11.88 | 12.21 | 12.37½ | 12.54 | 12.87 | 13.20 | 13.53 | 13.86 | 14.19 | 14.52 | 14.85 | 15.18 | 15.51 |
| 34 | 11.90 | 12.24 | 12.58 | 12.75 | 12.92 | 13.26 | 13.60 | 13.94 | 14.28 | 14.62 | 14.96 | 15.30 | 15.64 | 15.98 |
| 35 | 12.25 | 12.60 | 12.95 | 13.12½ | 13.30 | 13.65 | 14.00 | 14.35 | 14.70 | 15.05 | 15.40 | 15.75 | 16.10 | 16.45 |
| 36 | 12.60 | 12.96 | 13.32 | 13.50 | 13.68 | 14.04 | 14.40 | 14.76 | 15.12 | 15.48 | 15.84 | 16.20 | 16.56 | 16.92 |
| 37 | 12.95 | 13.32 | 13.69 | 13.87½ | 14.06 | 14.43 | 14.80 | 15.17 | 15.54 | 15.91 | 16.28 | 16.65 | 17.02 | 17.39 |
| 38 | 13.30 | 13.68 | 14.06 | 14.25 | 14.44 | 14.82 | 15.20 | 15.58 | 15.96 | 16.34 | 16.72 | 17.10 | 17.48 | 17.86 |
| 39 | 13.65 | 14.04 | 14.43 | 14.62½ | 14.82 | 15.21 | 15.60 | 15.99 | 16.38 | 16 77 | 17.16 | 17.55 | 17.94 | 18.33 |
| 40 | 14.00 | 14.40 | 14.80 | 15.00 | 15.20 | 15.60 | 16.00 | 16.40 | 16.80 | 17.20 | 17.60 | 18.00 | 18.40 | 18.80 |
| 41 | 14.35 | 14.76 | 15.17 | 15.37½ | 15.58 | 15.99 | 16.40 | 16.81 | 17.22 | 17.63 | 18 04 | 18.45 | 18.86 | 19.27 |
| 42 | 14.70 | 15.12 | 15.54 | 15.75 | 15.96 | 16 38 | 16.80 | 17.22 | 17.64 | 18.06 | 18.48 | 18.90 | 19.32 | 19.74 |
| 43 | 15.05 | 15.48 | 15.91 | 16.12½ | 16.34 | 16.77 | 17.20 | 17.63 | 18.06 | 18.49 | 18.92 | 19.35 | 19.78 | 20.21 |
| 44 | 15.40 | 15.84 | 16.28 | 16.50 | 16.72 | 17.16 | 17.60 | 18.04 | 18.48 | 18.92 | 19.36 | 19.80 | 20.24 | 20.68 |
| 45 | 15.75 | 16.20 | 16.65 | 16.87½ | 17.10 | 17.55 | 18.00 | 18.45 | 18.90 | 19.35 | 19.80 | 20.25 | 20.70 | 21.15 |
| 46 | 16.10 | 16.56 | 17.02 | 17.25 | 17.48 | 17 94 | 18.40 | 18.86 | 19.32 | 19.78 | 20.24 | 20.70 | 21.16 | 21.62 |
| 47 | 16.45 | 16.92 | 17.39 | 17.62½ | 17.86 | 18.33 | 18.80 | 19.27 | 19.74 | 20.21 | 20.68 | 21.15 | 21.62 | 22.09 |
| 48 | 16.80 | 17.28 | 17.76 | 18.00 | 18.24 | 18.72 | 19.20 | 19.68 | 20.16 | 20.64 | 21.12 | 21.60 | 22.08 | 22.56 |
| 49 | 17.15 | 17.64 | 18.13 | 18.37½ | 18.62 | 19.11 | 19.60 | 20.09 | 20.58 | 21.07 | 21.56 | 22.05 | 22.54 | 23.03 |
| 50 | 17.50 | 18.00 | 18.50 | 18.75 | 19.00 | 19.50 | 20.00 | 20.50 | 21.00 | 21.50 | 22.00 | 22.50 | 23.00 | 23.50 |
| 60 | 21.00 | 21.60 | 22.20 | 22.50 | 22.80 | 23.40 | 24.00 | 24.60 | 25.20 | 25.80 | 26 40 | 27.00 | 27.60 | 28.20 |
| 70 | 24.50 | 25.20 | 25.90 | 26.25 | 26.60 | 27.30 | 28.00 | 28.70 | 29.40 | 30.10 | 30.80 | 31.50 | 32.20 | 32.90 |
| 80 | 28.00 | 29.80 | 29.60 | 30.00 | 30.40 | 31.20 | 32.00 | 32.80 | 33.60 | 34.40 | 35.20 | 36.00 | 36.80 | 37.60 |
| 90 | 31.50 | 32.40 | 33.30 | 33.75 | 34.20 | 35.10 | 36.00 | 36.90 | 37.80 | 38.70 | 39.60 | 40.50 | 41.40 | 42.30 |
| 100 | 35.00 | 36.00 | 37.00 | 37.50 | 38.00 | 39.00 | 40.00 | 41.00 | 42.00 | 43.00 | 44.00 | 45.00 | 46.00 | 47.00 |

## Ready Reckoner—Continued

The first column gives the NUMBER—the top columns the PRICES.

| Nos. | 48c. | 49c. | 50c. | 51c. | 52c. | 53c. | 54c. | 55c. | 60c. | 62½c. | 65c. | 66⅔c. | 70c. | 75c. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | .96 | .98 | 1.00 | 1.02 | 1.04 | 1.06 | 1.08 | 1.10 | 1.20 | 1.25 | 1.30 | 1.33⅓ | 1.40 | 1.50 |
| 3 | 1.44 | 1.47 | 1.50 | 1.53 | 1.56 | 1.59 | 1.62 | 1.65 | 1.80 | 1.87½ | 1.95 | 2.00 | 2.10 | 2.25 |
| 4 | 1.92 | 1.96 | 2.00 | 2.04 | 2.08 | 2.12 | 2.16 | 2.20 | 2.40 | 2.50 | 2.60 | 2.66⅔ | 2.80 | 3.00 |
| 5 | 2.40 | 2.45 | 2.50 | 2.55 | 2.60 | 2.65 | 2.70 | 2.75 | 3.00 | 3.12½ | 3.25 | 3.33⅓ | 3.50 | 3.75 |
| 6 | 2.88 | 2.94 | 3.00 | 3.06 | 3.12 | 3.18 | 3.24 | 3.30 | 3.60 | 3.75 | 3.90 | 4.00 | 4.20 | 4.50 |
| 7 | 3.36 | 3.43 | 3.50 | 3.57 | 3.64 | 3.71 | 3.78 | 3.85 | 4.20 | 4.37½ | 4.55 | 4.66⅔ | 4.90 | 5.25 |
| 8 | 3.84 | 3.92 | 4.00 | 4.08 | 4.16 | 4.24 | 4.32 | 4.40 | 4.80 | 5.00 | 5.20 | 5.33⅓ | 5.60 | 6.00 |
| 9 | 4.32 | 4.41 | 4.50 | 4.59 | 4.68 | 4.77 | 4.86 | 4.95 | 5.40 | 5.62½ | 5.85 | 6.00 | 6.30 | 6.75 |
| 10 | 4.80 | 4.90 | 5.00 | 5.10 | 5.20 | 5.30 | 5.40 | 5.50 | 6.00 | 6.25 | 6.50 | 6.66⅔ | 7.00 | 7.50 |
| 11 | 5.28 | 5.39 | 5.50 | 5.61 | 5.72 | 5.83 | 5.94 | 6.05 | 6.60 | 6.87½ | 7.15 | 7.33⅓ | 7.70 | 8.25 |
| 12 | 5.76 | 5.88 | 6.00 | 6.12 | 6.24 | 6.36 | 6.48 | 6.60 | 7.20 | 7.50 | 7.80 | 8.00 | 8.40 | 9.00 |
| 13 | 6.24 | 6.37 | 6.50 | 6.63 | 6.76 | 6.89 | 7.02 | 7.15 | 7.80 | 8.12½ | 8.45 | 8.66⅔ | 9.10 | 9.75 |
| 14 | 6.72 | 6.86 | 7.00 | 7.14 | 7.28 | 7.42 | 7.56 | 7.70 | 8.40 | 8.75 | 9.10 | 9.33⅓ | 9.80 | 10.50 |
| 15 | 7.20 | 7.35 | 7.50 | 7.65 | 7.80 | 7.95 | 8.10 | 8.25 | 9.00 | 9.37½ | 9.75 | 10.00 | 10.50 | 11.25 |
| 16 | 7.68 | 7.84 | 8.00 | 8.16 | 8.32 | 8.48 | 8.64 | 8.80 | 9.60 | 10.00 | 10.40 | 10.66⅔ | 11.20 | 12.00 |
| 17 | 8.16 | 8.33 | 8.50 | 8.67 | 8.84 | 9.01 | 9.18 | 9.35 | 10.20 | 10.62½ | 11.05 | 11.33⅓ | 11.90 | 12.75 |
| 18 | 8.64 | 8.82 | 9.00 | 9.18 | 9.36 | 9.54 | 9.72 | 9.90 | 10.80 | 11.25 | 11.70 | 12.00 | 12.60 | 13.50 |
| 19 | 9.12 | 9.31 | 9.50 | 9.69 | 9.88 | 10.07 | 10.26 | 10.45 | 11.40 | 11.87½ | 12.35 | 12.66⅔ | 13.30 | 14.25 |
| 20 | 9.60 | 9.80 | 10.00 | 10.20 | 10.40 | 10.60 | 10.80 | 11.00 | 12.00 | 12.50 | 13.00 | 13.33⅓ | 14.00 | 15.00 |
| 21 | 10.08 | 10.29 | 10.50 | 10.71 | 10.92 | 11.13 | 11.34 | 11.55 | 12.60 | 13.12½ | 13.65 | 14.00 | 14.70 | 15.75 |
| 22 | 10.56 | 10.78 | 11.00 | 11.22 | 11.44 | 11.66 | 11.88 | 12.10 | 13.20 | 13.75 | 14.30 | 14.66⅔ | 15.40 | 16.50 |
| 23 | 11.04 | 11.27 | 11.50 | 11.73 | 11.96 | 12.19 | 12.42 | 12.65 | 13.80 | 14.37½ | 14.95 | 15.33⅓ | 16.10 | 17.25 |
| 24 | 11.52 | 11.76 | 12.00 | 12.24 | 12.48 | 12.72 | 12.96 | 13.20 | 14.40 | 15.00 | 15.60 | 16.00 | 16.80 | 18.00 |
| 25 | 12.00 | 12.25 | 12.50 | 12.75 | 13.00 | 13.25 | 13.50 | 13.75 | 15.00 | 15.62½ | 16.25 | 16.66⅔ | 17.50 | 18.75 |
| 26 | 12.48 | 12.74 | 13.00 | 13.26 | 13.52 | 13.78 | 14.04 | 14.30 | 15.60 | 16.25 | 16.90 | 17.33⅓ | 18.20 | 19.50 |
| 27 | 12.96 | 13.23 | 13.50 | 13.77 | 14.04 | 14.31 | 14.58 | 14.85 | 16.20 | 16.87½ | 17.55 | 18.00 | 18.90 | 20.25 |
| 28 | 13.44 | 13.72 | 14.00 | 14.28 | 14.56 | 14.84 | 15.12 | 15.40 | 16.80 | 17.50 | 18.20 | 18.66⅔ | 19.60 | 21.00 |
| 29 | 13.92 | 14.21 | 14.50 | 14.79 | 15.08 | 15.37 | 15.66 | 15.95 | 17.40 | 18.12½ | 18.85 | 19.33⅓ | 20.30 | 21.75 |
| 30 | 14.40 | 14.70 | 15.00 | 15.30 | 15.60 | 15.90 | 16.20 | 16.50 | 18.00 | 18.75 | 19.50 | 20.00 | 21.00 | 22.50 |
| 31 | 14.88 | 15.19 | 15.50 | 15.81 | 16.12 | 16.43 | 16.74 | 17.05 | 18.60 | 19.37½ | 20.15 | 20.66⅔ | 21.70 | 23.25 |
| 32 | 15.36 | 15.68 | 16.00 | 16.32 | 16.64 | 16.96 | 17.28 | 17.60 | 19.20 | 20.00 | 20.80 | 21.33⅓ | 22.40 | 24.00 |
| 33 | 15.84 | 16.17 | 16.50 | 16.83 | 17.16 | 17.49 | 17.82 | 18.15 | 19.80 | 20.62½ | 21.45 | 22.00 | 23.10 | 24.75 |
| 34 | 16.32 | 16.66 | 17.00 | 17.34 | 17.68 | 18.02 | 18.36 | 18.70 | 20.40 | 21.25 | 22.10 | 22.66⅔ | 23.80 | 25.50 |
| 35 | 16.80 | 17.15 | 17.50 | 17.85 | 18.20 | 18.55 | 18.90 | 19.25 | 21.00 | 21.87½ | 22.75 | 23.33⅓ | 24.50 | 26.25 |
| 36 | 17.28 | 17.64 | 18.00 | 18.36 | 18.72 | 19.08 | 19.44 | 19.80 | 21.60 | 22.50 | 23.40 | 24.00 | 25.20 | 27.00 |
| 37 | 17.76 | 18.13 | 18.50 | 18.87 | 19.24 | 19.61 | 19.98 | 20.35 | 22.20 | 23.12½ | 24.05 | 24.66⅔ | 25.90 | 27.75 |
| 38 | 18.24 | 18.62 | 19.00 | 19.38 | 19.76 | 20.14 | 20.52 | 20.90 | 22.80 | 23.75 | 24.70 | 25.33⅓ | 26.60 | 28.50 |
| 39 | 18.72 | 19.11 | 19.50 | 19.89 | 20.28 | 20.67 | 21.06 | 21.45 | 23.40 | 24.37½ | 25.35 | 26.00 | 27.30 | 29.25 |
| 40 | 19.20 | 19.60 | 20.00 | 20.40 | 20.80 | 21.20 | 21.60 | 22.00 | 24.00 | 25.00 | 26.00 | 26.66⅔ | 28.00 | 30.00 |
| 41 | 19.68 | 20.09 | 20.50 | 20.91 | 21.32 | 21.73 | 22.14 | 22.55 | 24.60 | 25.62½ | 26.65 | 27.33⅓ | 28.70 | 30.75 |
| 42 | 20.16 | 20.58 | 21.00 | 21.42 | 21.84 | 22.26 | 22.68 | 23.10 | 25.20 | 26.25 | 27.30 | 28.00 | 29.40 | 31.50 |
| 43 | 20.64 | 21.07 | 21.50 | 21.93 | 22.36 | 22.79 | 23.22 | 23.65 | 25.80 | 26.87½ | 27.95 | 28.66⅔ | 30.10 | 32.25 |
| 44 | 21.12 | 21.56 | 22.00 | 22.44 | 22.88 | 23.32 | 23.76 | 24.20 | 26.40 | 27.50 | 28.60 | 29.33⅓ | 30.80 | 33.00 |
| 45 | 21.60 | 22.05 | 22.50 | 22.95 | 23.40 | 23.85 | 24.30 | 24.75 | 27.00 | 28.12½ | 29.25 | 30.00 | 31.50 | 33.75 |
| 46 | 22.08 | 22.54 | 23.00 | 23.46 | 23.92 | 24.38 | 24.84 | 25.30 | 27.60 | 28.75 | 29.90 | 30.66⅔ | 32.20 | 34.50 |
| 47 | 22.56 | 23.03 | 23.50 | 23.97 | 24.44 | 24.91 | 25.38 | 25.85 | 28.20 | 29.37½ | 30.55 | 31.33⅓ | 32.90 | 35.25 |
| 48 | 23.04 | 23.52 | 24.00 | 24.48 | 24.96 | 25.44 | 25.92 | 26.40 | 28.80 | 30.00 | 31.20 | 32.00 | 33.60 | 36.00 |
| 49 | 23.52 | 24.01 | 24.50 | 24.99 | 25.48 | 25.97 | 26.46 | 26.95 | 29.40 | 30.62½ | 31.85 | 32.66⅔ | 34.30 | 36.75 |
| 50 | 24.00 | 24.50 | 25.00 | 25.50 | 26.00 | 26.50 | 27.00 | 27.50 | 30.00 | 31.25 | 32.50 | 33.33⅓ | 35.00 | 37.50 |
| 60 | 28.80 | 29.40 | 30.00 | 30.60 | 31.20 | 31.80 | 32.40 | 33.00 | 36.00 | 37.50 | 39.00 | 40.00 | 42.00 | 45.00 |
| 70 | 33.60 | 34.30 | 35.00 | 35.70 | 36.40 | 37.10 | 37.80 | 38.50 | 42.00 | 43.75 | 45.50 | 46.66⅔ | 49.00 | 52.50 |
| 80 | 38.40 | 39.20 | 40.00 | 40.80 | 41.60 | 42.40 | 43.20 | 44.00 | 48.00 | 50.00 | 52.00 | 53.33⅓ | 56.00 | 60.00 |
| 90 | 43.20 | 44.10 | 45.00 | 45.90 | 46.80 | 47.70 | 48.60 | 49.50 | 54.00 | 56.25 | 58.50 | 60.00 | 63.00 | 67.50 |
| 100 | 48.00 | 49.00 | 50.00 | 51.00 | 52.00 | 53.00 | 54.00 | 55.00 | 60.00 | 62.50 | 65.00 | 66.66⅔ | 70.00 | 75.00 |

## Ready Reckoner—Continued

The first column gives the NUMBER—the top columns the PRICES.

| Nos. | 80c. | 85c. | 87½c. | 90c. | 95c. | 1.00 | 1.50 | 2.00 | 3.00 | 4.00 | 5.00 | 10.00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 1.60 | 1.70 | 1.75 | 1.80 | 1.90 | 2.00 | 3.00 | 4.00 | 6.00 | 8.00 | 10.00 | 20.00 |
| 3 | 2.40 | 2.55 | 2.62½ | 2.70 | 2.85 | 3.00 | 4.50 | 6.00 | 9.00 | 12.00 | 15.00 | 30.00 |
| 4 | 3.20 | 3.40 | 3.50 | 3.60 | 3.80 | 4.00 | 6.00 | 8.00 | 12.00 | 16.00 | 20.00 | 40.00 |
| 5 | 4.00 | 4.25 | 4.37½ | 4.50 | 4.75 | 5.00 | 7.50 | 10.00 | 15.00 | 20.00 | 25.00 | 50.00 |
| 6 | 4.80 | 5.10 | 5.25 | 5.40 | 5.70 | 6.00 | 9.00 | 12.00 | 18.00 | 24.00 | 30.00 | 60.00 |
| 7 | 5.60 | 5.95 | 6.12½ | 6.30 | 6.65 | 7.00 | 10.50 | 14.00 | 21.00 | 28.00 | 35.00 | 70.00 |
| 8 | 6.40 | 6.80 | 7.00 | 7.20 | 7.60 | 8.00 | 12.00 | 16.00 | 24.00 | 32.00 | 40.00 | 80.00 |
| 9 | 7.20 | 7.65 | 7.87½ | 8.10 | 8.55 | 9.00 | 13.50 | 18.00 | 27.00 | 36.00 | 45.00 | 90.00 |
| 10 | 8.00 | 8.50 | 8.75 | 9.00 | 9.50 | 10.00 | 15.00 | 20.00 | 30.00 | 40.00 | 50.00 | 100.00 |
| 11 | 8.80 | 9.35 | 9.62½ | 9.90 | 10.45 | 11.00 | 16.50 | 22.00 | 33.00 | 44.00 | 55.00 | 110.00 |
| 12 | 9.60 | 10.20 | 10.50 | 10.80 | 11.40 | 12.00 | 18.00 | 24.00 | 36.00 | 48.00 | 60.00 | 120.00 |
| 13 | 10.40 | 11.05 | 11.37½ | 11.70 | 12.35 | 13.00 | 19.50 | 26.00 | 39.00 | 52.00 | 65.00 | 130.00 |
| 14 | 11.20 | 11.90 | 12.25 | 12.60 | 13.30 | 14.00 | 21.00 | 28.00 | 42.00 | 56.00 | 70.00 | 140.00 |
| 15 | 12.00 | 12.75 | 13.12½ | 13.50 | 14.25 | 15.00 | 22.50 | 30.00 | 45.00 | 60.00 | 75.00 | 150.00 |
| 16 | 12.80 | 13.60 | 14.00 | 14.40 | 15.20 | 16.00 | 24.00 | 32.00 | 48.00 | 64.00 | 80.00 | 160.00 |
| 17 | 13.60 | 14.45 | 14.87½ | 15.30 | 16.15 | 17.00 | 25.50 | 34.00 | 51.00 | 68.00 | 85.00 | 170.00 |
| 18 | 14.40 | 15.30 | 15.75 | 16.20 | 17.10 | 18.00 | 27.00 | 36.00 | 54.00 | 72.00 | 90.00 | 180.00 |
| 19 | 15.20 | 16.15 | 16.62½ | 17.10 | 18.05 | 19.00 | 28.50 | 38.00 | 57.00 | 76.00 | 95.00 | 190.00 |
| 20 | 16.00 | 17.00 | 17.50 | 18.00 | 19.00 | 20.00 | 30.00 | 40.00 | 60.00 | 80.00 | 100.00 | 200.00 |
| 21 | 16.80 | 17.85 | 18.37½ | 18.90 | 19.95 | 21.00 | 31.50 | 42.00 | 63.00 | 84.00 | 105.00 | 210.00 |
| 22 | 17.60 | 18.70 | 19.25 | 19.80 | 20.90 | 22.00 | 33.00 | 44.00 | 66.00 | 88.00 | 110.00 | 220.00 |
| 23 | 18.40 | 19.55 | 20.12½ | 20.70 | 21.85 | 23.00 | 34.50 | 46.00 | 69.00 | 92.00 | 115.00 | 230.00 |
| 24 | 19.20 | 20.40 | 21.00 | 21.60 | 22.80 | 24.00 | 36.00 | 48.00 | 72.00 | 96.00 | 120.00 | 240.00 |
| 25 | 20.00 | 21.25 | 21.87½ | 22.50 | 23.75 | 25.00 | 37.50 | 50.00 | 75.00 | 100.00 | 125.00 | 250.00 |
| 26 | 20.80 | 22.10 | 22.75 | 23.40 | 24.70 | 26.00 | 39.00 | 52.00 | 78.00 | 104.00 | 130.00 | 260.00 |
| 27 | 21.60 | 22.95 | 23.62½ | 24.30 | 25.65 | 27.00 | 40.50 | 54.00 | 81.00 | 108.00 | 135.00 | 270.00 |
| 28 | 22.40 | 23.80 | 24.50 | 25.20 | 26.60 | 28.00 | 42.00 | 56.00 | 84.00 | 112.00 | 140.00 | 280.00 |
| 29 | 23.20 | 24.65 | 25.37½ | 26.10 | 27.55 | 29.00 | 43.50 | 58.00 | 87.00 | 116.00 | 145.00 | 290.00 |
| 30 | 24.00 | 25.50 | 26.25 | 27.00 | 28.50 | 30.00 | 45.00 | 60.00 | 90.00 | 120.00 | 150.00 | 300.00 |
| 31 | 24.80 | 26.35 | 27.12½ | 27.90 | 29.45 | 31.00 | 46.50 | 62.00 | 93.00 | 124.00 | 155.00 | 310.00 |
| 32 | 25.60 | 27.20 | 28.00 | 28.80 | 30.40 | 32.00 | 48.00 | 64.00 | 96.00 | 128.00 | 160.00 | 320.00 |
| 33 | 26.40 | 28.05 | 28.87½ | 29.70 | 31.35 | 33.00 | 49.50 | 66.00 | 99.00 | 132.00 | 165.00 | 330.00 |
| 34 | 27.20 | 28.90 | 29.75 | 30.60 | 32.30 | 34.00 | 51.00 | 68.00 | 102.00 | 136.00 | 170.00 | 340.00 |
| 35 | 28.00 | 29.75 | 30.62½ | 31.50 | 33.25 | 35.00 | 52.50 | 70.00 | 105.00 | 140.00 | 175.00 | 350.00 |
| 36 | 28.80 | 30.60 | 31.50 | 32.40 | 34.20 | 36.00 | 54.00 | 72.00 | 108.00 | 144.00 | 180.00 | 360.00 |
| 37 | 29.60 | 31.45 | 32.37½ | 33.30 | 35.15 | 37.00 | 55.50 | 74.00 | 111.00 | 148.00 | 185.00 | 370.00 |
| 38 | 30.40 | 32.30 | 33.25 | 34.20 | 36.10 | 38.00 | 57.00 | 76.00 | 114.00 | 152.00 | 190.00 | 380.00 |
| 39 | 31.20 | 33.15 | 34.12½ | 35.10 | 37.05 | 39.00 | 58.50 | 78.00 | 117.00 | 156.00 | 195.00 | 390.00 |
| 40 | 32.00 | 34.00 | 35.00 | 36.00 | 38.00 | 40.00 | 60.00 | 80.00 | 120.00 | 160.00 | 200.00 | 400.00 |
| 41 | 32.80 | 34.85 | 35.87½ | 36.90 | 38.95 | 41.00 | 61.50 | 82.00 | 123.00 | 164.00 | 205.00 | 410.00 |
| 42 | 33.60 | 35.70 | 36.75 | 37.80 | 39.90 | 42.00 | 63.00 | 84.00 | 126.00 | 168.00 | 210.00 | 420.00 |
| 43 | 34.40 | 36.55 | 37.62½ | 38.70 | 40.85 | 43.00 | 64.50 | 86.00 | 129.00 | 172.00 | 215.00 | 430.00 |
| 44 | 35.00 | 37.40 | 38.50 | 39.60 | 41.80 | 44.00 | 66.00 | 88.00 | 132.00 | 176.00 | 220.00 | 440.00 |
| 45 | 36.00 | 38.25 | 39.37½ | 40.50 | 42.75 | 45.00 | 67.50 | 90.00 | 135.00 | 180.00 | 225.00 | 450.00 |
| 46 | 36.80 | 39.10 | 40.25 | 41.40 | 43.70 | 46.00 | 69.00 | 92.00 | 138.00 | 184.00 | 230.00 | 460.00 |
| 47 | 37.60 | 39.95 | 41.12½ | 42.30 | 44.65 | 47.00 | 70.50 | 94.00 | 141.00 | 188.00 | 235.00 | 470.00 |
| 48 | 38.40 | 40.80 | 42.00 | 43.20 | 45.60 | 48.00 | 72.00 | 96.00 | 144.00 | 192.00 | 240.00 | 480.00 |
| 49 | 39.20 | 41.65 | 42.87½ | 44.10 | 46.55 | 49.00 | 73.50 | 98.00 | 147.00 | 196.00 | 245.00 | 490.00 |
| 50 | 40.00 | 42.50 | 43.75 | 45.00 | 47.50 | 50.00 | 75.00 | 100.00 | 150.00 | 200.00 | 250.00 | 500.00 |
| 60 | 48.00 | 51.00 | 52.50 | 54.00 | 57.00 | 60.00 | 90.00 | 120.00 | 180.00 | 240.00 | 300.00 | 600.00 |
| 70 | 56.00 | 59.50 | 61.25 | 63.00 | 66.50 | 70.00 | 105.00 | 140.00 | 210.00 | 280.00 | 350.00 | 700.00 |
| 80 | 64.00 | 68.00 | 70.00 | 72.00 | 76.00 | 80.00 | 120.00 | 160.00 | 240.00 | 320.00 | 400.00 | 800.00 |
| 90 | 72.00 | 76.50 | 78.75 | 81.00 | 85.50 | 90.00 | 135.00 | 180.00 | 270.00 | 360.00 | 450.00 | 900.00 |
| 100 | 80.00 | 85.00 | 87.50 | 90.00 | 95.00 | 100.00 | 150.00 | 200.00 | 300.00 | 400.00 | 500.00 | 1000.00 |

## INTEREST TABLES FOR DAILY USE

### Bankers' Time Table

Showing the number of days from any day in one month to the same day in any other.

| From / To | Jan. | Feb. | March | April | May | June | July | Aug. | Sep. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan | 365 | 31 | 59 | 90 | 120 | 151 | 181 | 212 | 243 | 273 | 304 | 334 |
| Feb | 334 | 365 | 28 | 59 | 89 | 120 | 150 | 181 | 212 | 242 | 273 | 303 |
| March | 306 | 337 | 365 | 31 | 61 | 92 | 122 | 153 | 184 | 214 | 245 | 275 |
| April | 275 | 306 | 334 | 365 | 30 | 61 | 91 | 122 | 153 | 183 | 214 | 244 |
| May | 245 | 276 | 304 | 335 | 365 | 31 | 61 | 92 | 123 | 153 | 184 | 214 |
| June | 214 | 245 | 273 | 304 | 334 | 365 | 30 | 61 | 92 | 122 | 153 | 183 |
| July | 184 | 215 | 243 | 274 | 304 | 335 | 365 | 31 | 62 | 92 | 123 | 153 |
| Aug | 153 | 184 | 212 | 243 | 273 | 304 | 334 | 365 | 31 | 61 | 92 | 122 |
| Sep | 122 | 153 | 181 | 212 | 242 | 273 | 303 | 334 | 365 | 30 | 61 | 91 |
| Oct | 92 | 123 | 151 | 182 | 212 | 243 | 273 | 304 | 335 | 365 | 31 | 61 |
| Nov | 61 | 92 | 120 | 151 | 181 | 212 | 242 | 273 | 304 | 334 | 365 | 30 |
| Dec | 31 | 62 | 90 | 121 | 151 | 182 | 212 | 243 | 274 | 304 | 335 | 365 |

NOTE.—Find in the left-hand column the month from any day of which you wish to compute the number of days to the same day in any other month; then follow the line along until under the desired month, and you have the required number of days.

Example: How many days from May 17 to Nov. 17? 184 days. Ans.

## The Possibilities of Compound Interest

There was a mortgage issued out in Idaho, way back in 1861, amounting to $170.00 with interest at the rate of 10% per month. The conditions were not fulfilled, and at the end of some fifty years, the mortgage was still unsatisfied. With interest at the rate of 10% per month, compounded semi-annually, the debt at that time amounted to $45,972,003,182,-826.50, nearly forty-six trillions of dollars. Let us take an every day case of the man who smokes 2 or 3 10-cent cigars every day. The same money put out at 6% compound interest would grow with startling rapidity as shown in the following table:

### The Cost of Smoking

| FROM THE AGE OF— | Two Cigars a Day at 10 Cents Each | | Three Cigars a Day at 10 Cents Each | |
|---|---|---|---|---|
| | Principal | Prin. & Int. | Principal | Prin. & Int. |
| 20 to 25 years | $ 365.00 | $ 418.43 | $ 547.50 | $ 627.95 |
| 20 to 30 " | 730.00 | 980.78 | 1,095.00 | 1,471.56 |
| 20 to 35 " | 1,095.00 | 1,736.52 | 1,642.50 | 2,717.85 |
| 20 to 40 " | 1,460.00 | 2,752.20 | 2,190.00 | 4,281.24 |
| 20 to 45 " | 1,825.00 | 4,115.92 | 2,737.50 | 6,382.47 |
| 20 to 50 " | 2,190.00 | 5,949.88 | 3,285.00 | 9,205.16 |
| 20 to 55 " | 2,555.00 | 8,414.47 | 3,832.50 | 12,998.61 |
| 20 to 60 " | 2,920.00 | 11,738.03 | 4,380.00 | 18,100.14 |
| 20 to 65 " | 3,285.00 | 16,093.51 | 4,927.50 | 24,952.72 |
| 20 to 70 " | 3,650.00 | 21,937.72 | 5,475.00 | 34,162.14 |

### Time at Which Money Doubles at Interest

| Rate Per Cent. | Simple Interest. | Compound Interest. |
|---|---|---|
| 2 | 50 years. | 35 years 1 day. |
| 2½ | 40 years. | 28 years 26 days. |
| 3 | 33 years 4 months. | 23 years 164 days. |
| 3½ | 28 years 208 days. | 20 years 54 days. |
| 4 | 25 years. | 17 years 246 days. |
| 4½ | 22 years 81 days. | 15 years 273 days. |
| 5 | 20 years. | 15 years 75 days. |
| 6 | 16 years 8 months. | 12 years 327 days. |
| 7 | 14 years 104 days. | 10 years 89 days. |
| 8 | 12½ years. | 9 years 2 days. |
| 9 | 11 years 40 days. | 8 years 16 days. |
| 10 | 10 years. | 7 years 100 days. |

## Compound Interest Table

Showing the amount of $1 from 1 to 15 years at compound interest, interest added semi-annually, at different rates. This table will be found valuable in computing interest on Savings Bank deposits, etc.

| YEARS. | 3 Per Cent. | 4 Per Cent. | 5 Per Cent. | 6 Per Cent. | 7 Per Cent. | 8 Per Cent. | 10 Per Cent. |
|---|---|---|---|---|---|---|---|
| ½ | 1.015000 | 1.020000 | 1.025000 | 1.030000 | 1.035000 | 1.040000 | 1.050000 |
| 1 | 1.030225 | 1.040400 | 1.050625 | 1.060900 | 1.071225 | 1.081600 | 1.102500 |
| 1½ | 1.045678 | 1.061208 | 1.079890 | 1.092727 | 1.108718 | 1.124864 | 1.157625 |
| 2 | 1.061363 | 1.082432 | 1.103813 | 1.125509 | 1.147523 | 1.169858 | 1.215506 |
| 2½ | 1.077284 | 1.104081 | 1.131408 | 1.159274 | 1.187686 | 1.216653 | 1.276281 |
| 3 | 1.09344 | 1.126162 | 1.159693 | 1.194052 | 1.229255 | 1.265319 | 1.340095 |
| 3½ | 1.109844 | 1.148685 | 1.188685 | 1.229874 | 1.272279 | 1.315931 | 1.407100 |
| 4 | 1.126492 | 1.171659 | 1.218403 | 1.226770 | 1.316809 | 1.368569 | 1.477455 |
| 4½ | 1.143389 | 1.195092 | 1.248863 | 1.304773 | 1.362897 | 1.423312 | 1.551328 |
| 5 | 1.16054 | 1.218994 | 1.280084 | 1.343916 | 1.410598 | 1.480244 | 1.628894 |
| 5½ | 1.177949 | 1.243374 | 1.312086 | 1.384234 | 1.459969 | 1.539454 | 1.710339 |
| 6 | 1.195618 | 1.268241 | 1.344888 | 1.425761 | 1.511068 | 1.601032 | 1.795856 |
| 6½ | 1.213552 | 1.293606 | 1.378511 | 1.468533 | 1.563956 | 1.665073 | 1.885649 |
| 7 | 1.231755 | 1.319478 | 1.412973 | 1.512589 | 1.618694 | 1.731676 | 1.979931 |
| 7½ | 1.250232 | 1.345868 | 1.448298 | 1.557967 | 1.675349 | 1.800943 | 2.078923 |
| 8 | 1.268985 | 1.372785 | 1.484505 | 1.604706 | 1.733986 | 1.872981 | 2.182874 |
| 8½ | 1.288020 | 1.400241 | 1.521618 | 1.652847 | 1.794675 | 1.947900 | 2.292019 |
| 9 | 1.307340 | 1.428246 | 1.559658 | 1.702433 | 1.857489 | 2.025816 | 2.406619 |
| 9½ | 1.326950 | 1.456811 | 1.598650 | 1.753506 | 1.922501 | 2.106849 | 2.526950 |
| 10 | 1.346855 | 1.485947 | 1.638616 | 1.806111 | 1.989789 | 2.191123 | 2.653297 |
| 10½ | 1.367058 | 1.515666 | 1.679581 | 1.860294 | 2.059431 | 2.278768 | 2.785962 |
| 11 | 1.387563 | 1.545980 | 1.721571 | 1.916103 | 2.131511 | 2.369919 | 2.925260 |
| 11½ | 1.408377 | 1.576899 | 1.764610 | 1.973586 | 2.206114 | 2.464715 | 3.071523 |
| 12 | 1.429503 | 1.608437 | 1.808726 | 2.032794 | 2.283328 | 2.563304 | 3.225100 |
| 12½ | 1.450945 | 1.640606 | 1.853944 | 2.093778 | 2.363245 | 2.665836 | 3.386355 |
| 13 | 1.472709 | 1.673418 | 1.900292 | 2.156591 | 2.445959 | 2.772470 | 3.555672 |
| 13½ | 1.494800 | 1.706886 | 1.947800 | 2.221289 | 2.531567 | 2.883368 | 3.733456 |
| 14 | 1.517222 | 1.741024 | 1.996495 | 2.287927 | 2.620172 | 2.998703 | 3.920129 |
| 14½ | 1.539980 | 1.775845 | 2.046407 | 2.356565 | 2.711878 | 3.118651 | 4.116135 |
| 15 | 1.563080 | 1.811361 | 2.097567 | 2.427262 | 2.806793 | 3.243397 | 4.321940 |

Example.—What will $400 amount to in 8 years and 6 months at 4 per cent compound interest, interest added semi-annually? Referring to table it is found $1 in 8 years and 6 months at 4 per cent will amount to $1.400241. The amount of $400 will be 400 times this or $560.0964.

Note.—If the interest only be wanted, deduct the principal, $400, from $560.0964.

## The Lightning Method for Calculating Interest

### Where the Time is For Days Only.

RULE: To find the interest on any given sum for any number of days, multiply the principal by the number of days, point off the two right-hand figures in the product and then divide as follows:

| | | | | |
|---|---|---|---|---|
| At | 4 | per cent | divide | by 90 |
| At | 4½ | per cent | divide | by 80 |
| At | 5 | per cent | divide | by 72 |
| At | 6 | per cent | divide | by 60 |
| At | 7 | per cent | divide | by 52 |
| At | 7½ | per cent | divide | by 48 |

| | | | | | |
|---|---|---|---|---|---|
| At | 8 | per | cent | divide | by 45 |
| At | 9 | per | cent | divide | by 40 |
| At | 10 | per | cent | divide | by 36 |
| At | 12 | per | cent | divide | by 30 |

EXAMPLE:—What is the interest on $900 for 8 days at 6%?
SOLUTION:—900×8÷60=$1.20 interest.

## When the Time Consists of Years, Months, and Days

1. RULE:—Reduce years to months, adding the number of months, then place 1/3 of the number of days to the right of the months with a decimal point between.
2. Now move the decimal point two places to the left in the principal and divide by 2; the result will equal the interest for one month at 6% per cent.
3. Multiply the interest for one month by the number of months and the product will be the interest at 6% for the given time.

Then:

| | | | | | |
|---|---|---|---|---|---|
| For | 4 | per | cent | decrease | product 1/3 |
| For | 4½ | per | cent | decrease | product 1/4 |
| For | 5 | per | cent | decrease | product 1/6 |
| For | 5½ | per | cent | decrease | product 1/12 |
| For | 7 | per | cent | increase | product 1/6 |
| For | 7½ | per | cent | increase | product 1/4 |
| For | 8 | per | cent | increase | product 1/3 |
| For | 8½ | per | cent | increase | product 5/12 |
| For | 9 | per | cent | increase | product 1/2 |
| For | 10 | per | cent | increase | product 2/3 |
| For | 11 | per | cent | increase | product 5/6 |
| For | 12 | per | cent | double the | product. |

EXAMPLE:—What is the interest on $150 at 9% for 1 year, 4 months, and 12 days?

Solution: One year equals 12 months
Add 4 months
12 days ÷3 equal .4

16.4 months
$1.50÷2=.75 Interest for 1 month at 6%.
.75x16.4=12.30 Interest at 6%.
$12.30 plus 6.15 ($12.30 increased by ½ itself)=$18.45 Interest 9%.

## Another Simple Six Per Cent Method

Rule: Multiply the principal by the interest on $1.00 for the given time at the 6% rate and then increase or decrease the interest as per above table for any other rate.

Interest 6% on $1.00 for 1 year equals .06
" 1 mo. " .005
" 1 day " .000 1/6

Example: Find the interest on $180 for 3 years 5 months and 21 days at 7½%.

Solution:

| | |
|---|---|
| $180×3 × .06 equals | $32.40 |
| 180×5 × .005 " | 4.50 |
| 180×21×.000 1/6 " | .6$ |
| Interest at 6% | 37.53 |
| Increased by ¼ | 9.38 |
| Interest at 7½% | $46.91 |

## Bankers' 60 Day Interest Method

In banking a great many loans are made and interest figured on 30, 60, and 90 days time. The following is a simple method:

RULE 1. To find the interest on any amount for 60 days, move the decimal point two places to the left in the principal and the result will be the interest at 6%.

2. For 30 days divide by 2; for 15 days divide by 4; for 90 days increase by ½; for 120 days multiply by 2.

3. For any other rate than 6% increase or decrease result as shown in previous table.

EXAMPLE: What is the interest on $350 for 90 days at 7%?

SOLUTION:

| | |
|---|---|
| $350 at 6% for 60 days..... | $3.50 |
| For 90 days increased by ½..... | 1.75 |
| Interest for 90 days at 6%..... | 5.25 |
| For 7% increase by 1/6..... | .88 |
| Interest at 7%..... | $6.13 |

NOTE: The above rules are based on 360 days to the year, whereas it actually contains 365 days. To find the exact or accurate interest decrease the result obtained by 1/73 of itself and the answer will be as though the interest had been originally figured on the basis of 365 days to the year. But in sums of $500 or less or with times of 30 days or less, the difference between the 360 and 365 days basis is too small to make appreciable difference. Besides, 360 days are now generally accepted as a basis.

## How to Use the Interest Tables

1. The interest on any sum of money, and for any length of time, may be obtained, by adding to or doubling any certain sum, or length of time in the tables, viz: If the interest on a certain sum of money at 8 per cent for a given time should be $28, one-half of $28 or $14 would equal the interest at 4 per cent, etc.

2. If the interest at 6 per cent should amount to $26 on a certain sum of money for a given time, twice that amount or $52 would equal the interest at 12 per cent, and half that amount would equal the interest at 3 per cent.

3. The tables are computed on the principle of 360 days in a year, the rule adopted by bankers and merchants throughout the entire country.

4. When the fraction of interest is a half cent or more, a whole cent is taken, but when less than a half cent, nothing is charged.

EXAMPLE: Find the interest on $150.00 for 9 mos., 19 days at 5½%. From Table,

| | | | | | | |
|---|---|---|---|---|---|---|
| Interest | on $100.00 | for 9 mo. | @ | 5 per | cent, | $3.75 |
| Interest | on 100.00 | for 9 mo. | @ ½ of | 1 per | cent, | .38 |
| Interest | on 50.00 | for 9 mo. | @ | 5 per | cent, | 1.90 |
| Interest | on 50.00 | for 9 mo. | @ ½ of | 1 per | cent, | .20 |
| Interest | on 100.00 | for 19 da. | @ | 5 per | cent, | .26 |
| Interest | on 100.00 | for 19 da. | @ ½ of | 1 per | cent, | .03 |
| Interest | on 50.00 | for 19 da. | @ | 5 per | cent, | .10 |
| Interest | on 50.00 | for 19 da. | @ ½ of | 1 per | cent, | .00 |
| | | Interest on amount..... | | | | $6.62 |

## Interest at ½ of One Per Cent

| TIME | $1 | $2 | $3 | $4 | $5 | $6 | $7 | $8 | $9 | $10 | $100 | $1000 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Day | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | $.00 | $.00 | $ .01 |
| 2 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .03 |
| 3 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .04 |
| 4 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .06 |
| 5 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .07 |
| 6 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .08 |
| 7 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .10 |
| 8 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .01 | .11 |
| 9 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .01 | .13 |
| 10 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .01 | .14 |
| 11 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .02 | .15 |
| 12 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .02 | .17 |
| 13 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .02 | .18 |
| 14 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .02 | .19 |
| 15 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .02 | .21 |
| 16 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .02 | .22 |
| 17 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .02 | .24 |
| 18 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .03 | .25 |
| 19 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .03 | .26 |
| 20 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .03 | .28 |
| 21 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .03 | .29 |
| 22 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .03 | .31 |
| 23 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .03 | .32 |
| 24 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .03 | .33 |
| 25 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .03 | .35 |
| 26 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .04 | .36 |
| 27 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .04 | .38 |
| 28 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .04 | .39 |
| 29 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .04 | .40 |
| 1 Month | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .04 | .42 |
| 2 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .08 | .83 |
| 3 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .13 | 1.25 |
| 4 " | .00 | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .02 | .02 | .17 | 1.67 |
| 5 " | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .21 | 2.08 |
| 6 " | .00 | .00 | .00 | .01 | .01 | .02 | .02 | .02 | .02 | .03 | .25 | 2.50 |
| 7 " | .00 | .00 | .00 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .30 | 2.97 |
| 8 " | .00 | .00 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .03 | .33 | 3.33 |
| 9 " | .00 | .00 | .01 | .02 | .02 | .02 | .03 | .03 | .03 | .04 | .38 | 3.75 |
| 10 " | .00 | .00 | .01 | .02 | .02 | .03 | .03 | .03 | .04 | .04 | .42 | 4.17 |
| 11 " | .00 | .00 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | 46 | 4.58 |
| 1 Year | .00 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .05 | .50 | 5.00 |

## Interest at Five Per Cent

| TIME | $1 | $2 | $3 | $4 | $5 | $6 | $7 | $8 | $9 | $10 | $100 | $1000 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Day | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | $.00 | $ .01 | $ .14 |
| 2 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .03 | .28 |
| 3 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .04 | .42 |
| 4 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .01 | .01 | .06 | .56 |
| 5 " | .00 | .00 | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .07 | .69 |
| 6 " | .00 | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .08 | .83 |
| 7 " | .00 | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .10 | .97 |
| 8 " | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .11 | 1.11 |
| 9 " | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .01 | .13 | 1.25 |
| 10 " | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .01 | .14 | 1.39 |
| 11 " | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .02 | .15 | 1.53 |
| 12 " | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .01 | .02 | .17 | 1.67 |
| 13 " | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .02 | .02 | .18 | 1.81 |
| 14 " | .00 | .00 | .01 | 01 | .01 | .01 | .01 | .02 | .02 | .02 | .19 | 1.94 |
| 15 " | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .21 | 2.08 |
| 16 " | .00 | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .22 | 2.22 |
| 17 " | .00 | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .24 | 2.36 |
| 18 " | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .03 | .25 | 2.50 |
| 19 " | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .03 | .26 | 2.64 |
| 20 " | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .28 | 2.78 |
| 21 " | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .29 | 2.92 |
| 22 " | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .31 | 3.06 |
| 23 " | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .03 | .32 | 3.19 |
| 24 " | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .03 | .33 | 3.33 |
| 25 " | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .03 | .35 | 3.47 |
| 26 " | .00 | .01 | .01 | .01 | .02 | .02 | .03 | .03 | .03 | .04 | .36 | 3.61 |
| 27 " | .00 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .03 | .04 | .38 | 3.75 |
| 28 " | .00 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .04 | .04 | .39 | 3.80 |
| 29 " | .00 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .04 | .04 | .40 | 4.03 |
| 1 Month | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .03 | .04 | .04 | .42 | 4.17 |
| 2 " | .01 | .02 | .03 | .03 | .04 | .05 | .06 | .07 | .08 | .08 | .83 | 8.33 |
| 3 " | .01 | .03 | .04 | .05 | .06 | .08 | .09 | .10 | .11 | .13 | 1.25 | 12.50 |
| 4 " | .02 | .03 | .05 | .07 | .08 | .10 | .12 | .13 | .15 | .17 | 1.67 | 16.67 |
| 5 " | .02 | .04 | .06 | .08 | .10 | .13 | .15 | .17 | .19 | .21 | 2.08 | 20.83 |
| 6 " | .03 | .05 | .08 | .10 | .13 | .15 | .18 | .20 | .23 | .25 | 2.50 | 25.00 |
| 7 " | .03 | .06 | .09 | .12 | .15 | .18 | .20 | .23 | .26 | .29 | 2.92 | 29.17 |
| 8 " | .03 | .07 | .10 | .13 | .17 | .20 | .23 | .27 | .30 | .33 | 3.33 | 33.33 |
| 9 " | .04 | .08 | .11 | .15 | .19 | .23 | .26 | .30 | .34 | .38 | 3.75 | 37.50 |
| 10 " | .04 | .08 | .13 | .17 | .21 | .25 | .29 | .33 | .38 | .42 | 4.17 | 41.67 |
| 11 " | .05 | .09 | .14 | .18 | .23 | .28 | .32 | .37 | .41 | .46 | 4.58 | 45.83 |
| 1 Year | .05 | .10 | .15 | .20 | .25 | .30 | .35 | .40 | .45 | .50 | 5.00 | 50.00 |

## Interest at Six Per Cent

| TIME | $1 | $2 | $3 | $4 | $5 | $6 | $7 | $8 | $9 | $10 | $100 | $1000 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Day | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | $.00 | $ .02 | $ .17 |
| 2 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .03 | .33 |
| 3 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .01 | .05 | .50 |
| 4 " | .00 | .00 | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .07 | .67 |
| 5 " | .00 | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .08 | .83 |
| 6 " | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .10 | 1.00 |
| 7 " | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .12 | 1.17 |
| 8 " | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .01 | .13 | 1.33 |
| 9 " | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .02 | .15 | 1.50 |
| 10 " | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .02 | .02 | .17 | 1.67 |
| 11 " | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .02 | .02 | .18 | 1.83 |
| 12 " | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .20 | 2.00 |
| 13 " | .00 | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .22 | 2.17 |
| 14 " | .00 | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .23 | 2.33 |
| 15 " | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .03 | .25 | 2.50 |
| 16 " | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .03 | .27 | 2.67 |
| 17 " | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .28 | 2.83 |
| 18 " | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .03 | .03 | .30 | 3.00 |
| 19 " | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .03 | .32 | 3.17 |
| 20 " | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .03 | .33 | 3.33 |
| 21 " | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .04 | .35 | 3.50 |
| 22 " | .00 | .01 | .01 | .01 | .02 | .02 | .03 | .03 | .03 | .04 | .37 | 3.67 |
| 23 " | .00 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .03 | .04 | .38 | 3.83 |
| 24 " | .00 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .04 | .04 | .40 | 4.00 |
| 25 " | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .03 | .04 | .04 | .42 | 4.17 |
| 26 " | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .03 | .04 | .04 | .43 | 4.33 |
| 27 " | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .45 | 4.50 |
| 28 " | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .47 | 4.67 |
| 29 " | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .48 | 4.83 |
| 1 Month | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .05 | .50 | 5.00 |
| 2 " | .01 | .02 | .03 | .04 | .05 | .06 | .07 | .08 | .09 | .10 | 1.00 | 10.00 |
| 3 " | .02 | .03 | .05 | .06 | .08 | .09 | .11 | .12 | .14 | .15 | 1.50 | 15.00 |
| 4 " | .02 | .04 | .06 | .08 | .10 | .12 | .14 | .16 | .18 | .20 | 2.00 | 20.00 |
| 5 " | .03 | .05 | .08 | .10 | .13 | .15 | .18 | .20 | .23 | .25 | 2.50 | 25.00 |
| 6 " | .03 | .06 | .09 | .12 | .15 | .18 | .21 | .24 | .27 | .30 | 3.00 | 30.00 |
| 7 " | .04 | .07 | .11 | .14 | .18 | .21 | .25 | .28 | .32 | .35 | 3.50 | 35.00 |
| 8 " | .04 | .08 | .12 | .16 | .20 | .24 | .28 | .32 | .36 | .40 | 4.00 | 40.00 |
| 9 " | .05 | .09 | .14 | .18 | .23 | .27 | .32 | .36 | .41 | .45 | 4.50 | 45.00 |
| 10 " | .05 | .10 | .15 | .20 | .25 | .30 | .35 | .40 | .45 | .50 | 5.00 | 50.00 |
| 11 " | .06 | .11 | .17 | .22 | .28 | .33 | .39 | .44 | .50 | .55 | 5.50 | 55.00 |
| 1 Year | .06 | .12 | .18 | .24 | .30 | .36 | .42 | .48 | .54 | .60 | 6.00 | 60.00 |

## Interest at Seven Per Cent

| TIME | $1 | $2 | $3 | $4 | $5 | $6 | $7 | $8 | $9 | $10 | $100 | $1000 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Day | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | $.00 | $ .02 | $ .19 |
| 2 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .04 | .39 |
| 3 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .01 | .01 | .06 | .58 |
| 4 " | .00 | .00 | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .08 | .78 |
| 5 " | .00 | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .10 | .97 |
| 6 " | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .12 | 1.17 |
| 7 " | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .01 | .14 | 1.36 |
| 8 " | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .02 | .16 | 1.56 |
| 9 " | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .02 | .02 | .18 | 1.75 |
| 10 " | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .19 | 1.94 |
| 11 " | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .21 | 2.14 |
| 12 " | .00 | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .23 | 2.33 |
| 13 " | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .03 | .25 | 2.53 |
| 14 " | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .03 | .27 | 2.72 |
| 15 " | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .29 | 2.92 |
| 16 " | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .03 | .03 | .31 | 3.11 |
| 17 " | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .03 | .33 | 3.31 |
| 18 " | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .04 | .35 | 3.50 |
| 19 " | .00 | .01 | .01 | .01 | .02 | .02 | .03 | .03 | .03 | .04 | .37 | 3.69 |
| 20 " | .00 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .04 | .04 | .39 | 3.89 |
| 21 " | .00 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .04 | .04 | .41 | 4.08 |
| 22 " | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .03 | .04 | .04 | .43 | 4.28 |
| 23 " | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .04 | .45 | 4.47 |
| 24 " | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .47 | 4.67 |
| 25 " | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .49 | 4.86 |
| 26 " | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .05 | .51 | 5.06 |
| 27 " | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .05 | .53 | 5.25 |
| 28 " | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .05 | .54 | 5.44 |
| 29 " | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .05 | .05 | .05 | .56 | 5.64 |
| 1 Month | .01 | .01 | .02 | .02 | .03 | .04 | .04 | .05 | .05 | .06 | .58 | 5.83 |
| 2 " | .01 | .02 | .04 | .05 | .06 | .07 | .08 | .09 | .11 | .12 | 1.17 | 11.67 |
| 3 " | .02 | .04 | .05 | .07 | .09 | .11 | .12 | .14 | .16 | .18 | 1.75 | 17.50 |
| 4 " | .02 | .05 | .07 | .09 | .12 | .14 | .16 | .19 | .21 | .23 | 2.33 | 23.33 |
| 5 " | .03 | .06 | .09 | .12 | .15 | .18 | .20 | .23 | .26 | .29 | 2.92 | 29.17 |
| 6 " | .04 | .07 | .11 | .14 | .18 | .21 | .25 | .28 | .32 | .35 | 3.50 | 35.00 |
| 7 " | .04 | .08 | .12 | .16 | .20 | .25 | .29 | .33 | .37 | .41 | 4.08 | 40.83 |
| 8 " | .05 | .09 | .14 | .19 | .23 | .28 | .33 | .37 | .42 | .47 | 4.67 | 46.67 |
| 9 " | .05 | .11 | .16 | .21 | .26 | .32 | .37 | .42 | .47 | .53 | 5.25 | 52.50 |
| 10 " | .06 | .12 | .18 | .23 | .29 | .35 | .41 | .47 | .53 | .58 | 5.83 | 58.33 |
| 11 " | .06 | .13 | .19 | .26 | .32 | .39 | .45 | .51 | .58 | .64 | 6.42 | 64.17 |
| 1 Year | .07 | .14 | .21 | .28 | .45 | .42 | .49 | .56 | .63 | .70 | 7.00 | 70.00 |

## Interest at Eight Per Cent

| TIME | $1 | $2 | $3 | $4 | $5 | $6 | $7 | $8 | $9 | $10 | $100 | $1000 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Day | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | $ .00 | $ .02 | $ .22 |
| 2 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .04 | .44 |
| 3 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .07 | .67 |
| 4 " | .00 | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .09 | .89 |
| 5 " | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .11 | 1.11 |
| 6 " | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .01 | .13 | 1.33 |
| 7 " | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .02 | .16 | 1.56 |
| 8 " | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .02 | .02 | .18 | 1.78 |
| 9 " | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .20 | 2.00 |
| 10 " | .00 | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .22 | 2.22 |
| 11 " | .00 | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .24 | 2.44 |
| 12 " | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .03 | .27 | 2.67 |
| 13 " | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .29 | 2.89 |
| 14 " | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .03 | .03 | .31 | 3.11 |
| 15 " | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .03 | .33 | 3.33 |
| 16 " | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .04 | .36 | 3.56 |
| 17 " | .00 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .03 | .04 | .38 | 3.78 |
| 18 " | .00 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .04 | .04 | .40 | 4.00 |
| 19 " | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .03 | .04 | .04 | .42 | 4.22 |
| 20 " | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .04 | .44 | 4.44 |
| 21 " | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .47 | 4.67 |
| 22 " | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .49 | 4.89 |
| 23 " | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .05 | .51 | 5.11 |
| 24 " | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .05 | .53 | 5.33 |
| 25 " | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .06 | .56 | 5.56 |
| 26 " | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .05 | .05 | .06 | .58 | 5.78 |
| 27 " | .01 | .01 | .02 | .02 | .03 | .04 | .04 | .05 | .05 | .06 | .60 | 6.00 |
| 28 " | .01 | .01 | .02 | .02 | .03 | .04 | .04 | .05 | .06 | .06 | .62 | 6.22 |
| 29 " | .01 | .01 | .02 | .03 | .03 | .04 | .05 | .05 | .06 | .06 | .64 | 6.44 |
| 1 Month | .01 | .01 | .02 | .03 | .03 | .04 | .05 | .05 | .06 | .07 | .67 | 6.67 |
| 2 " | .01 | .03 | .04 | .05 | .07 | .08 | .09 | .11 | .12 | .13 | 1.33 | 13.33 |
| 3 " | .02 | .04 | .06 | .08 | .10 | .12 | .14 | .16 | .18 | .20 | 2.00 | 20.00 |
| 4 " | .03 | .05 | .08 | .11 | .13 | .16 | .19 | .21 | .24 | .27 | 2.67 | 26.67 |
| 5 " | .03 | .07 | .10 | .13 | .17 | .20 | .23 | .27 | .30 | .33 | 3.33 | 33.33 |
| 6 " | .04 | .08 | .12 | .16 | .20 | .24 | .28 | .32 | .36 | .40 | 4.00 | 40.00 |
| 7 " | .05 | .09 | .14 | .19 | .23 | .28 | .33 | .37 | .42 | .47 | 4.67 | 46.67 |
| 8 " | .05 | .11 | .16 | .21 | .27 | .32 | .37 | .43 | .48 | .53 | 5.33 | 53.33 |
| 9 " | .06 | .12 | .18 | .24 | .30 | .36 | .42 | .48 | .54 | .60 | 6.00 | 60.00 |
| 10 " | .07 | .13 | .20 | .27 | .33 | .40 | .47 | .53 | .60 | .67 | 6.67 | 66.67 |
| 11 " | .07 | .15 | .22 | .29 | .37 | .44 | .51 | .59 | .66 | .73 | 7.33 | 73.33 |
| 1 Year | .08 | .16 | .24 | .32 | .40 | .48 | .56 | .64 | .72 | .80 | 8.00 | 80.00 |

## Interest at Nine Per Cent

| TIME | $1 | $2 | $3 | $4 | $5 | $6 | $7 | $8 | $9 | $10 | $100 | $1000 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Day | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | $.00 | $ .02 | $ .25 |
| 2 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .05 | .50 |
| 3 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .08 | .75 |
| 4 " | .00 | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .10 | 1.00 |
| 5 " | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .12 | 1.25 |
| 6 " | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .02 | .15 | 1.50 |
| 7 " | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .02 | .02 | .17 | 1.75 |
| 8 " | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .20 | 2.00 |
| 9 " | .00 | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .23 | 2.25 |
| 10 " | .00 | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .02 | .25 | 2.50 |
| 11 " | .00 | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .03 | .27 | 2.75 |
| 12 " | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .03 | .03 | .30 | 3.00 |
| 13 " | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .03 | .32 | 3.25 |
| 14 " | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .03 | .35 | 3.50 |
| 15 " | .00 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .03 | .04 | .38 | 3.75 |
| 16 " | .00 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .04 | .04 | .40 | 4.00 |
| 17 " | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .03 | .04 | .04 | .42 | 4.25 |
| 18 " | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .45 | 4.50 |
| 19 " | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .47 | 4.75 |
| 20 " | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .05 | .05 | .50 | 5.00 |
| 21 " | .00 | .01 | .01 | .02 | .03 | .03 | .04 | .04 | .05 | .05 | .53 | 5 25 |
| 22 " | .00 | .01 | .01 | .02 | .03 | .03 | .04 | .04 | .05 | .05 | .55 | 5.50 |
| 23 " | .00 | .01 | .02 | .02 | .03 | .03 | .04 | .05 | .05 | .06 | .57 | 5.75 |
| 24 " | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .05 | .05 | .06 | .60 | 6 00 |
| 25 " | .01 | .01 | .02 | .02 | .03 | .04 | .04 | .05 | .06 | .06 | .62 | 6.25 |
| 26 " | .01 | .01 | .02 | .03 | .03 | .04 | .05 | .05 | .06 | .06 | .65 | 6.50 |
| 27 " | .01 | .01 | .02 | .03 | .03 | .04 | .05 | .05 | .06 | .07 | .68 | 6.75 |
| 28 " | .01 | .01 | .02 | .03 | .03 | .04 | .05 | .06 | .06 | .07 | .70 | 7.00 |
| 29 " | .01 | .01 | .02 | .03 | .03 | .04 | .05 | .06 | .06 | .07 | .72 | 7.25 |
| 1 Month | .01 | .02 | .02 | .03 | .04 | .05 | .05 | .06 | .07 | .08 | .75 | 7.50 |
| 2 " | .02 | .03 | .05 | .06 | .08 | .09 | .11 | .12 | .14 | .15 | 1.50 | 15.00 |
| 3 " | .02 | .05 | .07 | .09 | .11 | .14 | .16 | .18 | .20 | .23 | 2.25 | 22.50 |
| 4 " | .03 | .06 | .09 | .12 | .15 | .18 | .21 | .24 | .27 | .30 | 3.00 | 30.00 |
| 5 " | .04 | .08 | .11 | .15 | .19 | .23 | .26 | .30 | .34 | .38 | 3.75 | 37.50 |
| 6 " | .05 | .09 | .14 | .18 | .23 | .27 | .32 | .36 | .41 | .45 | 4.50 | 45.00 |
| 7 " | .05 | .11 | .16 | .21 | .26 | .32 | .37 | .42 | .47 | .53 | 5.25 | 52.50 |
| 8 " | .06 | .12 | .18 | .24 | .30 | .36 | .42 | .48 | .54 | .60 | 6.00 | 60.00 |
| 9 " | .06 | .14 | .20 | .27 | .33 | .41 | .47 | .54 | .60 | .68 | 6.75 | 67.50 |
| 10 " | .08 | .15 | .23 | .30 | .38 | .45 | .53 | .60 | .68 | .75 | 7.50 | 75.00 |
| 11 " | .08 | .17 | .24 | .33 | .41 | .50 | .57 | .66 | .74 | .83 | 8 25 | 82 50 |
| 1 Year | .09 | .18 | .27 | .36 | .45 | .54 | .63 | .72 | .81 | .90 | 9.00 | 90.00 |

## Interest at Ten Per Cent

| TIME | $1 | $2 | $3 | $4 | $5 | $6 | $7 | $8 | $9 | $10 | $100 | $1000 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Day | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | $.00 | $ .03 | $ .28 |
| 2 " | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .00 | .01 | .01 | .06 | .56 |
| 3 " | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .08 | .83 |
| 4 " | .00 | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .11 | 1.11 |
| 5 " | .00 | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .01 | .14 | 1.39 |
| 6 " | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .01 | .02 | .02 | .17 | 1.67 |
| 7 " | .00 | .00 | .01 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .19 | 1.94 |
| 8 " | .00 | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .22 | 2.22 |
| 9 " | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .03 | .25 | 2.50 |
| 10 " | .00 | .01 | .01 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .28 | 2.78 |
| 11 " | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .03 | .03 | .31 | 3.06 |
| 12 " | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .03 | .33 | 3.33 |
| 13 " | .00 | .01 | .01 | .01 | .02 | .02 | .03 | .03 | .03 | .04 | .36 | 3.61 |
| 14 " | .00 | .01 | .01 | .02 | .02 | .02 | .03 | .03 | .04 | .04 | .39 | 3.89 |
| 15 " | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .03 | .04 | .04 | .42 | 4.17 |
| 16 " | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .04 | .44 | 4.44 |
| 17 " | .00 | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .47 | 4.72 |
| 18 " | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .05 | .50 | 5.00 |
| 19 " | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .05 | .53 | 5.28 |
| 20 " | .01 | .01 | .02 | .02 | .03 | .03 | .04 | .04 | .05 | .06 | .56 | 5.56 |
| 21 " | .01 | .01 | .02 | .02 | .03 | .04 | .04 | .05 | .05 | .06 | .58 | 5.83 |
| 22 " | .01 | .01 | .02 | .02 | .03 | .04 | .04 | .05 | .06 | .06 | .61 | 6.11 |
| 23 " | .01 | .01 | .02 | .03 | .03 | .04 | .04 | .05 | .06 | .06 | .64 | 6.39 |
| 24 " | .01 | .01 | .02 | .03 | .03 | .04 | .05 | .05 | .06 | .07 | .67 | 6.67 |
| 25 " | .01 | .01 | .02 | .03 | .03 | .04 | .05 | .06 | .06 | .07 | .69 | 6.94 |
| 26 " | .01 | .01 | .02 | .03 | .04 | .04 | .05 | .06 | .07 | .07 | .72 | 7.22 |
| 27 " | .01 | .02 | .02 | .03 | .04 | .05 | .05 | .06 | .07 | .08 | .75 | 7.50 |
| 28 " | .01 | .02 | .02 | .03 | .04 | .05 | .05 | .06 | .07 | .08 | .78 | 7.78 |
| 29 " | .01 | .02 | .02 | .03 | .04 | .05 | .06 | .06 | .07 | .08 | .81 | 8.06 |
| 1 Month | .01 | .02 | .03 | .03 | .04 | .05 | .06 | .07 | .08 | .08 | .83 | 8.33 |
| 2 " | .02 | .03 | .05 | .07 | .08 | .10 | .12 | .13 | .15 | .17 | 1.67 | 16.67 |
| 3 " | .03 | .05 | .08 | .10 | .13 | .15 | .18 | .20 | .23 | .25 | 2.50 | 25.00 |
| 4 " | .03 | .07 | .10 | .13 | .17 | .20 | .23 | .27 | .30 | .33 | 3.33 | 33.33 |
| 5 " | .04 | .08 | .13 | .17 | .21 | .25 | .29 | .33 | .38 | .42 | 4.17 | 41.67 |
| 6 " | .05 | .10 | .15 | .20 | .25 | .30 | .35 | .40 | .45 | .50 | 5.00 | 50.00 |
| 7 " | .06 | .12 | .18 | .23 | .29 | .35 | .41 | .47 | .53 | .58 | 5.83 | 58.33 |
| 8 " | .07 | .13 | .20 | .27 | .33 | .40 | .47 | .53 | .60 | .67 | 6.67 | 66.67 |
| 9 " | .08 | .15 | .23 | .30 | .38 | .45 | .53 | .60 | .68 | .75 | 7.50 | 75.00 |
| 10 " | .08 | .17 | .25 | .33 | .42 | .50 | .58 | .67 | .75 | .83 | 8.33 | 83.33 |
| 11 " | .09 | .18 | .28 | .37 | .46 | .55 | .64 | .73 | .83 | .92 | 9.17 | 91.67 |
| 1 Year | .10 | .20 | .30 | .40 | .50 | .60 | .70 | .80 | .90 | 1.00 | 10.00 | 100.00 |

## Interest Laws of the United States

Showing days of grace in the various States.

| States and Territories | Penalty of Usury | Rate | Special |
|---|---|---|---|
| Alabama | Forfeiture of all interest (a) | 8 | 8 per ct. |
| Alaska | Forfeiture of debt (a) | 8 | 12 per ct. |
| Arizona | Forfeiture of all interest (b) | 6 | 10 per ct. |
| Arkansas | Forfeiture of principal and interest (a) | 6 | 10 per ct. |
| California | Forfeiture of triple the interest (b) (h) | 7 | 12 per ct. |
| Colorado | None (b) | 8 | No limit. |
| Connecticut | Criminal offense (b) | 6 | 12 per ct. |
| Delaware | Forfeiture of interest and principal (b) | 6 | 6 per ct. |
| District of Col. | Forfeiture of entire interest (b) | 6 | 10 per ct. |
| Florida | Forfeiture of interest (b) | 8 | 10 per ct. |
| Georgia | Forfeiture of excess of interest | 7 | 8 per ct. |
| Idaho | (c) (b) | 7 | 12 per ct. |
| Illinois | Forfeiture of entire interest (b) | 5 | 7 per ct. |
| Indiana | Forfeiture of excess of interest (b) | 6 | 8 per ct. |
| Iowa | Forfeiture of interest and costs (e) (b) | 6 | 8 per ct. |
| Kansas | Forfeiture of double interest (b) | 6 | 10 per ct. |
| Kentucky | Forfeiture of excess of interest (b) | 6 | 6 per ct. |
| Louisiana | Forfeiture of interest (b) | 5 | 8 per ct. |
| Maine | None (a) (f) | 6 | No limit. |
| Maryland | Forfeiture of all excess interest (b) | 6 | 6 per ct. |
| Massachusetts | None (a) (f) | 6 | No limit. |
| Michigan | Forfeiture of interest (b) | 5 | 7 per ct. |
| Minnesota | Forfeiture of all interest with costs (b) | 6 | 10 per ct. |
| Mississippi | Forfeiture of interest (a) | 6 | 8 per ct. |
| Missouri | Forfeiture of interest to common school | 6 | 8 per ct. |
| Montana | None (b) | 8 | No limit. |
| Nebraska | Forfeiture of interest and costs (b) | 7 | 10 per ct. |
| Nevada | Excess interest null and void (b) | 7 | 12 per ct. |
| New Hampshire | Forfeiture of three times the excess interest (b) (f) | 6 | 6 per ct. |
| New Jersey | Forfeiture of entire interest and costs(b) | 6 | 6 per ct. |
| New Mexico | Misdemeanor to contract for more (a). | 6 | 12 per ct. |
| New York | Neither principal or interest can be collected (d) (b) | 6 | 6 per ct. |
| North Carolina | Forfeiture of interest (a) (f) | 6 | 6 per ct. |
| North Dakota | None (b) | 6 | 10 per ct. |
| Ohio | None (b) | 6 | 8 per ct. |
| Oklahoma | Forfeiture of interest (a) | 6 | 10 per ct. |
| Oregon | Forfeiture of principal and interest to school funds (a) | 6 | 10 per ct. |
| Pennsylvania | Forfeiture of excess interest (b) | 6 | 6 per ct. |
| Rhode Island | None (a) (f) | 6 | No limit. |
| South Carolina | Forfeiture of double the interest (a) (f) | 7 | 8 per ct. |
| South Dakota | Forfeiture of all interest (a) | 7 | 12 per ct. |
| Tennessee | None (b) | 6 | 6 per ct. |
| Texas | Forfeiture of entire interest (a) (f) | 6 | 10 per ct. |
| Utah | Forfeiture of principal and interest (b) | 8 | 12 per ct. |
| Vermont | Forfeiture of excess of interest (b) | 6 | 6 per ct. |
| Virginia | Forfeiture of excess over 6 per cent (b) | 6 | 6 per ct. |
| Washington | (g) | 6 | 12 per ct. |
| West Virginia | Forfeiture of excess of interest (b) | 6 | 6 per ct. |
| Wisconsin | Forfeiture of entire interest (b) | 6 | 10 per ct. |
| Wyoming | Forfeiture of entire interest (a) | 8 | 12 per ct. |

(a) Grace. (b) No grace. (c) Loss of interest by lender; 10 per cent from borrower for school fund. (d) Contract void; punishable as misdemeanor. (e) Defendant also forfeits 10 per cent a year to school fund. (f) Days of grace. Sight, yes. Demand no. (g) Judgment recoverable for the principal less twice the amount of interest and once the amount of interest due at rate contracted for. (h) Action must be brought in 1 year.

## WHAT A BUSINESS MAN OUGHT TO KNOW ABOUT PRINTING*

1. Every business man resorts to some form of printing in order to carry on his business. When the average man orders stationery, or plans an advertising campaign the conversation with the printer or the written quotation strikes him as being a meaningless jumble of picas, ems, points, layouts, zincs, screens, reams, and equally unintelligible terms. The following pages have been prepared with special reference to the needs of the beginner, athough even the skilled craftsman will find them a source of convenient reference.

2. **Type Measurement.**—The **pica** is 12 points long or 1/6 of an inch. The **em** is a unit of measurement based on the square of the size of the individual type. It is a unit of area to determine the amount of matter set in a page of type. The **point** is measured **up** and **down**, not by width. An inch of type space measured up and down contains 72 points. Dividing 72 by the size of any type in points gives us the number of lines of that type which can be set solid, to an inch. For example, by dividing 72 by 8 we find that 9 lines of 8 point can be set, solid, in a single inch.

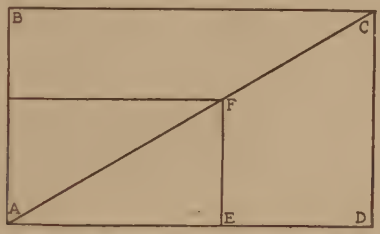
3. **Copy and Layout.**—By **copy** is meant such matter as is to be arranged in type form. The layout consists of a dummy indicating the position of the headings, text and illustrations, which the finished product shall contain.

4. **Illustrations.**—A **half-tone** is a reproduction of a photograph or wash drawing, on copper plates, to be used in printing. The design is first photographed thru a screen of fine lines, and the negative then printed on a copper plate and etched in acid. Rough paper requires coarse screen; highly finished stock takes a fine screen. Zinc etchings are reproduced from pen drawings, wood engravings, and printed pages, by exactly the same process as half tones except that no screen is used in making the negative. The **Ben Dey process** is one by which zinc plates are shaded and tinted for printing purposes. By the **color process** plates can be

*Much of the material used in this chapter is by special permission of the W. B. Conkey Company from their book "What a Business Man should Know about Printing and Bookmaking."

made to reproduce in several different colors. **An electrotype** is not an engraving. It is a metal reproduction of a half tone, etching, cut or type page for printing purposes.

**5. How to Determine the Dimensions of a Cut.**—Suppose you have a photograph to be reduced to a certain width and you want to know how high the cut will be. Draw a figure having the same dimensions as the photograph in this manner:




Now draw the diagonal line A C. Next mark off on the bottom line the width A E of the cut you desire made. The point at which the perpendicular F E touches the diagonal A C will give you the height of your cut when reduced. If the height is known the width can be determined in the same way.

TABLES OF TYPE SIZES.—The following tables will be found convenient in estimating the amount of space required for a certain amount of words or pages when set in different sizes of type.

## Handy Information on Type

| Size of Type | Words in 1000 ems | | Square inches in 1,000 ems | Number of ems in 1 pound |
|---|---|---|---|---|
| | Solid | Leaded | | |
| 5 point ..... | 305 | 207 | 8.91 | 1,024 |
| 6 point ..... | 312 | 222 | 6.94 | 576 |
| 8 point ..... | 370 | 259 | 12.35 | 324 |
| 10 point..... | 385 | 289 | 19.29 | 207 |
| 11 point ..... | 373 | 303 | 23.34 | 171 |
| 12 point ..... | 389 | 306 | 27.78 | 144 |

The above figures are approximate and vary slightly with different styles of type face; they are based on the solid slug.

## Relative Sizes of Type in Ems

A page set in 12 point contains 1000 ems.
The same page set in 11 point contains 1190 ems.
The same page set in 10 point contains 1440 ems.
The same page set in 9 point contains 1778 ems.
The same page set in 8 point contains 2250 ems.
The same page set in 7 point contains 2939 ems.
The same page set in 6 point contains 4000 ems.

## Number of Ems to Running Inch

### In Columns 10 to 30 Picas Wide

| Column Width in Picas | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 pt. Pica | 60 | 66 | 72 | 78 | 84 | 90 | 96 | 102 | 108 | 114 | 120 |
| 11 pt. Small Pica | 72 | 78 | 86 | 93 | 100 | 107 | 114 | 121 | 128 | 136 | 143 |
| 10 pt. Long Primer | 86 | 95 | 104 | 112 | 121 | 129 | 138 | 147 | 155 | 164 | 173 |
| 9 pt. Bourgeois | 107 | 117 | 128 | 139 | 149 | 160 | 171 | 181 | 192 | 203 | 213 |
| 8 pt. Brevier | 135 | 148 | 162 | 175 | 189 | 202 | 216 | 229 | 243 | 256 | 270 |
| 7 pt. Minion | 177 | 194 | 212 | 229 | 247 | 265 | 282 | 300 | 318 | 335 | 353 |
| 6 pt. Nonpareil | 240 | 264 | 288 | 312 | 336 | 360 | 384 | 408 | 432 | 456 | 480 |
| 5½ pt. Agate | 288 | 316 | 344 | 372 | 400 | 428 | 456 | 484 | 512 | 544 | 572 |

| Column Width in Picas | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|
| 12 pt. Pica | 126 | 132 | 138 | 144 | 150 | 156 | 162 | 168 | 174 | 180 |
| 11 pt. Small Pica | 150 | 157 | 164 | 171 | 178 | 185 | 192 | 200 | 207 | 214 |
| 10 pt. Long Primer | 181 | 190 | 199 | 207 | 216 | 225 | 233 | 242 | 250 | 259 |
| 9 pt. Bourgeois | 224 | 235 | 246 | 256 | 267 | 277 | 288 | 299 | 309 | 320 |
| 8 pt. Brevier | 283 | 297 | 310 | 324 | 337 | 351 | 364 | 378 | 391 | 405 |
| 7 pt. Minion | 371 | 388 | 406 | 424 | 441 | 459 | 477 | 494 | 512 | 529 |
| 6 pt. Nonpareil | 504 | 528 | 552 | 576 | 600 | 624 | 648 | 672 | 696 | 720 |
| 5½ pt. Agate | 600 | 628 | 656 | 684 | 712 | 740 | 768 | 800 | 828 | 856 |

## Words to the Square Inch

| | | | |
|---|---|---|---|
| 5 point, leaded | 50 | 9 point, solid | 28 |
| 5 point, solid | 69 | 10 point, leaded | 16 |
| 6 point, leaded | 34 | 10 point, solid | 21 |
| 6 point, solid | 47 | 11 point, leaded | 14 |
| 7 point, leaded | 27 | 11 point, solid | 17 |
| 7 point, solid | 38 | 12 point, leaded | 11 |
| 8 point, leaded | 23 | 12 point, solid | 14 |
| 8 point, solid | 32 | 14 point, solid | 11 |
| 9 point, leaded | 21 | 18 point, solid | 7 |

## Measurement of Composition Set in Standard Book Measures

Table showing the number of ems to a line, and the number of lines contained in 1,000 ems of matter, standard book measures. Also the space in inches, filled by 1,000 ems of matter in the different measures.

| STYLE OF TYPE | 21 Ems Pica | | | 23 Ems Pica | | | 25 Ems Pica | | |
|---|---|---|---|---|---|---|---|---|---|
| | No. ems in a line | No. lines 1000 ems | No. in. 1000 ems | No. ems in a line | No. lines 1000 ems | No. in. 1000 ems | No. ems in a line | No. lines 1000 ems | No. in. 1000 ems |
| 6 point | 42 | 24 | 2 | 46 | 21⅞ | 1⅞ | 50 | 20 | 1⅝ |
| 8 point | 31⅝ | 32¼ | 3⅛ | 35 | 28⅝ | 3¼ | 37½ | 26⅔ | 3 |
| 10 point | 25¼ | 39⅔ | 5⅛ | 27⅝ | 36 | 5 | 30 | 33⅓ | 4⅛ |
| 11 point | 23 | 43½ | 6¼ | 25 | 40 | 6⅛ | 27½ | 36⅔ | 5⅛ |
| 12 point | 21 | 48 | 8 | 23 | 43½ | 7¼ | 25 | 40 | 6⅔ |

PROOF READERS' MARKS.—The strange hieroglyphics on page 478 are proof readers' marks. They are in universal use. They not only save time in explaining corrections but they save space as well.

## NUMBER OF EMS IN SQUARE INCHES

| Square Inch | 6 pt. | 7 pt. | 8 pt. | 9 pt. | 10 pt. | 11 pt. | 12 pt. |
|---|---|---|---|---|---|---|---|
| 1 | 144 | 106 | 81 | 64 | 52 | 43 | 36 |
| 2 | 288 | 212 | 162 | 128 | 104 | 86 | 72 |
| 3 | 432 | 318 | 243 | 192 | 156 | 129 | 108 |
| 4 | 576 | 424 | 324 | 256 | 208 | 172 | 144 |
| 5 | 720 | 530 | 405 | 320 | 260 | 215 | 180 |
| 6 | 864 | 636 | 486 | 384 | 312 | 258 | 216 |
| 7 | 1008 | 742 | 567 | 448 | 364 | 301 | 252 |
| 8 | 1152 | 848 | 648 | 512 | 416 | 348 | 288 |
| 9 | 1296 | 954 | 729 | 576 | 468 | 387 | 324 |
| 10 | 1440 | 1060 | 810 | 640 | 520 | 430 | 360 |
| 11 | 1584 | 1166 | 981 | 704 | 572 | 473 | 396 |
| 12 | 1728 | 1272 | 972 | 768 | 624 | 516 | 432 |
| 13 | 1872 | 1378 | 1053 | 832 | 676 | 559 | 468 |
| 14 | 2016 | 1484 | 1134 | 896 | 728 | 602 | 504 |
| 15 | 2160 | 1590 | 1215 | 960 | 780 | 645 | 540 |
| 16 | 2304 | 1696 | 1296 | 1024 | 832 | 688 | 576 |
| 17 | 2448 | 1802 | 1377 | 1088 | 884 | 733 | 612 |
| 18 | 2592 | 1908 | 1458 | 1152 | 936 | 776 | 648 |
| 19 | 2736 | 2014 | 1539 | 1216 | 988 | 819 | 684 |
| 20 | 2880 | 2120 | 1620 | 1280 | 1040 | 862 | 720 |
| 21 | 3024 | 2226 | 1701 | 1344 | 1092 | 905 | 756 |
| 22 | 3168 | 2332 | 1782 | 1408 | 1144 | 948 | 792 |
| 23 | 3312 | 2438 | 1863 | 1472 | 1196 | 991 | 828 |
| 24 | 3456 | 2544 | 1944 | 1536 | 1248 | 1034 | 864 |
| 25 | 3600 | 2650 | 2025 | 1600 | 1300 | 1077 | 900 |

## PROOF-READERS' MARKS

| | |
|---|---|
| × Change bad letter | Superior figure |
| ⊥ Push down space | Inferior figure |
| 9 Turn over | [ *or* ] Move over |
| ℘ Take out (*dele*) | (?) Query |
| ʌ Left out; insert | *out, s. c.* Out, see copy |
| # Insert space | □ Em quad space |
| √ Even spacing | /1—/ One-em dash |
| ⌣ Less space | /2—/ Two-em dash |
| ⊂ Close up entirely | ¶ Paragraph |
| ⌐ Raise | *No* ¶ No paragraph |
| ⌙ Lower | *w. f.* Wrong font |
| /// Straighten lines | ..... Let it stand |
| ⊙ Period | *stet.* Let it stand |
| ⁘/ Comma | *tr.* Transpose |
| ⁖/ Colon | *Caps.* Capital letters |
| ⁏/ Semicolon | *s. c.* Small caps |
| ☆ Apostrophe | *l. c.* Lower case |
| ❝ Quotation | *Ital.* Italics |
| =/ Hyphen | *Rom.* Roman |

## Book Sizes by Name

32 mo. A book, the trimmed size of which is approximately 3½ x 5¼.

18 mo. A book, the trimmed size of which is approximately 4⅛ x 6⅜.

16 mo. A book, the trimmed size of which is approximately 4½ x 7⅛.

12 mo. A book, the trimmed size of which is approximately 5½ x 8.

Duodecimo. A book, the trimmed size of which is approximately 5⅛ x 8.

Crown Octavo. A book, the trimmed size of which is approximately 5¾ x 9.

Regular Octavo. A book, the trimmed size of which is approximately 6½ x 9⅞.

Royal Octavo. A book, the trimmed size of which is approximately 7¼ x 10¾.

Imperial Octavo. A book, the trimmed size of which is approximately 8¼ x 11⅞.

Quarto. A book, the trimmed size of which is approximately 9 x 12⅜.

NAMES, SIZES, AND WEIGHTS OF PAPER.—**Antique finished paper** is practically unfinished. **Laid** has a low finish but is watermarked. **Eggshell** is antique finished paper which has been ironed. **Machine finish** is smoother than antique having been calendered or ironed. **English finish** gives a smooth surface without gloss. S & SC means that the paper has been sized to make it glossy, and super-calendered to make it smooth. **Enameled** paper is coated to fill up the pores. **Dull Coated** is made in the same way but is dull instead of glossy. The following tables give detailed information as to names, sizes, and weights:

## Names and Sizes of Paper Sheets

| Name | Size |
|---|---|
| Flat letter | 10 x 16 inches |
| Double Flat Letter | 16 x 20 " |
| Flat Cap | 14 x 17 " |
| Double Cap | 17 x 28 " |
| Flat Foolscap | 13 x 16 " |
| Legal Cap | 13 x 16 " |
| Crown | 15 x 19 " |
| Demy | 16 x 21 " |
| Double Demy | 21 x 32 " |
| Folio Post | 17 x 22 " |
| Extra Size Folio | 19 x 23 " |
| Check Folio (Royal) | 19 x 24 " |
| Double Royal | 24 x 38 " |
| Super Royal | 20 x 28 " |
| Medium Writing | 18 x 23 " |
| Medium Printing | 18 x 24 " |
| Double Medium | 23 x 36 " |
| Regular Bank | 19 x 24 " |
| Elephant | 23 x 28 " |
| Double Elephant | 27 x 40 " |
| Columbian | 23 x 34 " |
| Imperial | 22 x 30 " |
| Imperial | 22 x 32 " |
| Book | 24 x 36 " |
| Atlas | 26 x 33 " |
| Antiquarian | 31 x 53 " |
| Cardboard | 22 x 28 " |

## COMPARATIVE WEIGHTS OF BOOK PAPERS

### Coated Two Sides

Substance Weight in Pounds—Basis 25x38

| Size | 60 | 70 | 80 | 90 | 100 | 120 |
|---|---|---|---|---|---|---|
| 24 x36 | 55 | 64 | 73 | 82 | 91 | 109 |
| 25 x38 | 60 | 70 | 80 | 90 | 100 | 120 |
| 26 x29 | 48 | 56 | 64 | 72 | 80 | 95 |
| 25 x40 | 63 | 74 | 84 | 95 | 105 | 126 |
| 28 x42 | 74 | 86 | 99 | 111 | 124 | 148 |
| 28 x44 | 78 | 91 | 104 | 117 | 130 | 155 |
| 29 x45 | 82 | 96 | 110 | 124 | 137 | 165 |
| 29 x52 | 96 | 112 | 128 | 144 | 160 | 190 |
| 30½x41 | 79 | 92 | 105 | 119 | 132 | 158 |
| 32 x44 | 89 | 104 | 119 | 133 | 148 | 178 |
| 33 x46 | 96 | 112 | 128 | 144 | 160 | 192 |
| 35 x45 | 100 | 116 | 132 | 149 | 166 | 199 |
| 36 x48 | 110 | 128 | 146 | 164 | 182 | 218 |
| 38 x50 | 120 | 140 | 160 | 180 | 200 | 240 |
| 41 x61 | 158 | 184 | 210 | 238 | 264 | 316 |
| 42 x56 | 148 | 172 | 198 | 222 | 248 | 296 |
| 44 x56 | 156 | 182 | 208 | 234 | 260 | 310 |
| 44 x64 | 178 | 208 | 238 | 266 | 296 | 356 |

# COMPARATIVE WEIGHTS OF BOOK PAPERS

## Uncoated Book Papers

Substance Weight in Pounds—Basis 25x38

| Size | 40 | 50 | 60 | 70 | 80 | 100 |
|---|---|---|---|---|---|---|
| 22 x32 | 29½ | 37 | 45 | 52 | 59½ | 74 |
| 24 x36 | 36 | 45 | 55 | 64 | 73 | 91 |
| 25 x38 | 40 | 50 | 60 | 70 | 80 | 100 |
| 26 x29 | 32 | 40 | 48 | 56 | 64 | 80 |
| 26 x40 | 44 | 55 | 66 | 77 | 88 | 109 |
| 28 x42 | 50 | 62 | 74 | 86 | 99 | 124 |
| 28 x44 | 52 | 65 | 78 | 91 | 104 | 130 |
| 29 x52 | 64 | 80 | 96 | 112 | 128 | 160 |
| 30½x41 | 53 | 66 | 79 | 92 | 105 | 132 |
| 32 x44 | 59 | 74 | 89 | 104 | 119 | 148 |
| 33 x46 | 64 | 80 | 96 | 112 | 128 | 160 |
| 34 x44 | 63 | 79 | 95 | 110 | 126 | 157 |
| 35 x45 | 66 | 83 | 100 | 116 | 132 | 166 |
| 36 x48 | 72 | 90 | 110 | 128 | 146 | 182 |
| 38 x50 | 80 | 100 | 120 | 140 | 160 | 200 |
| 41 x61 | 106 | 132 | 158 | 184 | 210 | 264 |
| 42 x56 | 100 | 124 | 148 | 172 | 198 | 248 |
| 44 x56 | 104 | 130 | 156 | 182 | 208 | 260 |
| 44 x64 | 118 | 148 | 178 | 208 | 238 | 296 |

# COMPARATIVE SIZES AND WEIGHTS BONDS, LEDGERS, AND FLAT WRITINGS

## Showing Standard Substance Weights

Double sizes are figured at double the weight of single sizes.

| Size | Substance Weight in Pounds, Basis 17x22 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 13 lbs. | 16 lbs. | 20 lbs. | 24 lbs. | 28 lbs. | 32 lbs. | 36 lbs. | 40 lbs. | 44 lbs. |
| 16 x21 | 11½ | 14½ | 18 | 21½ | 25 | 28½ | 32½ | 36 | 39½ |
| 16 x42 | 23 | 29 | 36 | 43 | 50 | 57 | 65 | 72 | 79 |
| 17 x22 | 13 | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 |
| 17 x28 | 16½ | 20½ | 25½ | 30½ | 35½ | 40½ | 46 | 51 | 56 |
| 18 x23 | 14½ | 17½ | 22 | 26½ | 31 | 35½ | 40 | 44½ | 48½ |
| 18 x46 | 29 | 35 | 44 | 53 | 62 | 71 | 80 | 89 | 97 |
| 19 x24 | 16 | 19½ | 24½ | 29½ | 34 | 39 | 44 | 49 | 53½ |
| 19 x26 | 17 | 21 | 26½ | 31½ | 37 | 42½ | 47½ | 53 | 58 |
| 20 x28 | 19½ | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 |
| 21 x32 | 23 | 29 | 36 | 43 | 50 | 57 | 65 | 72 | 79 |
| 22 x25½ | 19½ | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 |
| 22 x34 | 26 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | 88 |
| 22½x22½ | 17½ | 21½ | 27 | 32½ | 38 | 43½ | 48½ | 54 | 59½ |
| 22½x24½ | 19 | 23½ | 29½ | 35½ | 41½ | 47 | 53 | 59 | 65 |
| 22½x28½ | 22½ | 27½ | 34½ | 41 | 48 | 55 | 61½ | 68½ | 75½ |
| 22½x34 | 26½ | 32½ | 41 | 49 | 57½ | 65½ | 73½ | 82 | 90 |
| 22½x34½ | 27 | 33 | 41 | 50 | 58 | 66½ | 74½ | 83 | 91½ |
| 23 x24½ | 19½ | 24 | 30 | 36 | 42 | 48 | 54 | 60½ | 66½ |
| 23 x36 | 29 | 35 | 44 | 53 | 62 | 71 | 80 | 89 | 97 |
| 24 x38 | 32 | 39 | 49 | 59 | 68 | 78 | 88 | 98 | 107 |
| 24½x24½ | 21 | 25½ | 32 | 38½ | 45 | 51½ | 58 | 64 | 70½ |
| 24½x28½ | 24½ | 30 | 37½ | 45 | 52½ | 59½ | 67 | 74½ | 82 |
| 24½x29 | 24½ | 30½ | 38 | 45½ | 53 | 61 | 68½ | 76 | 83½ |
| 24½x38½ | 33 | 40½ | 50½ | 60½ | 70½ | 80½ | 91 | 101 | 111 |
| 25½x44 | 39 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 |
| 28 x34 | 33 | 41 | 51 | 61 | 71 | 81 | 92 | 102 | 112 |
| 34 x44 | 52 | 64 | 80 | 96 | 112 | 128 | 144 | 160 | 176 |

| | 500 | 1000 | 1500 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 500 | 1000 | 1500 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 |
| 2 | 250 | 500 | 750 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 |
| 3 | 167 | 334 | 500 | 667 | 834 | 1000 | 1167 | 1334 | 1500 | 1667 |
| 4 | 125 | 250 | 375 | 500 | 625 | 750 | 875 | 1000 | 1125 | 1250 |
| 5 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 |
| 6 | 84 | 167 | 250 | 334 | 417 | 500 | 584 | 667 | 750 | 834 |
| 7 | 72 | 143 | 215 | 286 | 358 | 429 | 500 | 572 | 643 | 715 |
| 8 | 63 | 125 | 188 | 250 | 313 | 375 | 438 | 500 | 563 | 625 |
| 9 | 56 | 112 | 167 | 223 | 278 | 334 | 389 | 445 | 500 | 556 |
| 10 | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| 11 | 46 | 91 | 137 | 182 | 228 | 273 | 319 | 364 | 410 | 455 |
| 12 | 42 | 84 | 126 | 168 | 209 | 250 | 292 | 334 | 375 | 417 |
| 13 | 39 | 77 | 116 | 154 | 193 | 231 | 270 | 308 | 347 | 385 |
| 14 | 36 | 72 | 108 | 144 | 179 | 215 | 250 | 286 | 322 | 358 |
| 15 | 34 | 67 | 100 | 134 | 167 | 200 | 234 | 267 | 300 | 334 |
| 16 | 32 | 63 | 94 | 125 | 157 | 188 | 219 | 250 | 282 | 313 |
| 17 | 30 | 50 | 89 | 118 | 148 | 177 | 206 | 236 | 265 | 295 |
| 18 | 28 | 56 | 84 | 112 | 139 | 167 | 195 | 223 | 250 | 279 |
| 19 | 27 | 53 | 79 | 106 | 132 | 158 | 185 | 211 | 237 | 264 |
| 20 | 25 | 50 | 75 | 100 | 125 | 150 | 175 | 200 | 225 | 250 |
| 21 | 24 | 48 | 72 | 96 | 120 | 143 | 167 | 191 | 215 | 239 |
| 22 | 23 | 46 | 69 | 91 | 114 | 137 | 160 | 182 | 205 | 228 |
| 23 | 22 | 44 | 66 | 87 | 109 | 131 | 153 | 174 | 196 | 218 |
| 24 | 21 | 42 | 63 | 84 | 105 | 125 | 146 | 167 | 188 | 209 |
| 25 | 20 | 40 | 60 | 80 | 100 | 120 | 140 | 160 | 180 | 200 |
| 26 | 20 | 39 | 58 | 77 | 97 | 116 | 135 | 154 | 174 | 193 |
| 27 | 19 | 38 | 56 | 75 | 93 | 112 | 130 | 149 | 167 | 186 |
| 28 | 18 | 36 | 54 | 72 | 90 | 108 | 125 | 143 | 161 | 179 |
| 29 | 18 | 36 | 54 | 72 | 87 | 103 | 121 | 138 | 156 | 173 |
| 30 | 17 | 34 | 51 | 67 | 84 | 100 | 117 | 134 | 150 | 167 |
| 31 | 17 | 33 | 49 | 65 | 81 | 97 | 113 | 130 | 146 | 162 |
| 32 | 16 | 32 | 47 | 63 | 79 | 94 | 110 | 125 | 141 | 157 |
| 33 | 16 | 31 | 46 | 61 | 76 | 91 | 107 | 122 | 137 | 152 |
| 34 | 15 | 30 | 45 | 59 | 74 | 89 | 103 | 118 | 133 | 148 |
| 35 | 15 | 29 | 43 | 58 | 72 | 86 | 100 | 115 | 129 | 143 |
| 36 | 14 | 28 | 42 | 56 | 70 | 84 | 98 | 112 | 125 | 139 |
| 37 | 14 | 28 | 41 | 55 | 68 | 82 | 95 | 109 | 122 | 136 |
| 38 | 14 | 27 | 40 | 53 | 66 | 79 | 93 | 106 | 119 | 132 |
| 39 | 13 | 26 | 39 | 52 | 65 | 77 | 90 | 103 | 116 | 131 |
| 40 | 13 | 25 | 38 | 50 | 63 | 75 | 88 | 100 | 113 | 125 |

Convenient table for figuring Paper Stock. Top column shows number of finished pieces required, left hand column shows number of pieces to size selected. Other figures show required number of sheets.

## USEFUL RULES AND TABLES FOR BUILDERS

### Roof Elevations

**The Gable** is a space in the form of a triangle on the end of a building, with a common double roof.

**The Pitch** of the roof is the relation which the height of the ridge above the level of the roof-plates bears to the span, or the distance between the studs on which the roof rests.

**Quarter Pitch** is a roof that is one-fourth, a third pitch one that is one-third, and a half pitch one that is one-half as high as the width of the building.

**The Span** is the width of the building.

### To Find the Area of the Gable End

RULE: Multiply the width of the building by the height of the roof and take one-half of the result for the number of square feet. If the roof is "quarter pitch" find the area in square feet by multiplying width of the roof by ⅛ of itself.

### Length of Rafters

The pitch and span should be figured so as to result in the length of a rafter that cuts with the least waste in material. A few inches may often result in a great saving.

The length of rafters for the common pitches can be determined by the following table of ratios. To the lengths thus obtained, however, must be added the extension of the rafters at the eaves.

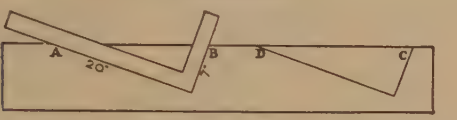
## Table of Ratios

| | | | | | | |
|---|---|---|---|---|---|---|
| For 1/4 | pitch | multiply | span | by | .559 | or 7/12 |
| " 1/3 | " | " | " | " | .6 | or 3/5 |
| " 3/8 | " | " | " | " | .625 | or 5/8 |
| " 1/2 | " | " | " | " | .71 | or 7/10 |
| " full | " | " | " | " | 1.12 | or 1 1/8 |

EXAMPLE: What must be the length of a rafter for a roof with a span 30 feet at 1/3 pitch?

SOLUTION: 30 x .6=18 feet plus extension at eaves, or 20 feet required length.

## How to Find the Length and Bevel of Rafters With Steel Square




1. Place your steel square on a board (say the building is 40 feet long), 20 inches from the corner one way, and 7 inches the other, and mark it as shown in the above figure. Now the angle at c will be the bevel of the upper end, and the angle at d the bevel at the lower end of the rafter.

2. Length of Rafter.—The length will be from a to b on the outer edge of the board. The 20 inches shows the 20 feet, or half of the width of the building; the 7 inches the 7 foot rise. Now the distance from a to b, on the edge of the board, is 21 inches, two-twelfths and one-quarter of a twelfth (always use a square with inches on one side divided into twelfths), therefore this rafter will be 21 feet and 2¼ inches long.

## Roofing

**How to Find the Number of Shingles Required For a Roof.**

RULE: Multiply the length of the ridge pole by twice the length of one rafter and if the shingles are to be exposed four inches to the weather multiply by 9; if exposed 4½ inches multiply by 8; if exposed 5 inches multiply by 7 1/5 and the result will be the number of shingles required for the roof.

NOTE: Shingles are 16 inches long and average about 4 inches wide. They are put up in bundles of 250 each. 900 shingles laid 4 inches or 800 shingles laid 4½ inches, or 720 shingles laid 5 inches to the weather, will cover 100 square feet.

EXAMPLE: How many shingles will it take to cover a roof 30 feet long with the rafters on each side 14 feet; shingles exposed 4½ inches?

SOLUTION: 30×14×2×8=6720 shingles.

## Stone Work

A cord of stone like a cord of wood is 8 feet long, 4 feet wide and 4 feet high and contains 128 cubic feet.

A perch of stone work is 16½ feet long, 1½ feet high and 1 foot thick and contains 24¾ cubic feet.

Usually 2¾ cubic feet of mortar and filling are contained in each perch of stone-work.

## How to Find the Number of Perches in a Wall

RULE: Multiply together length, height and thickness in feet, and divide this product by 24¾ (or multiply by .0404) and the result will be the number of perches in the wall.

EXAMPLE: A wall is 40 feet long, 15 feet high and 2 feet thick. How many perches?

SOLUTION: $40\times15\times2\div24\frac{3}{4}=48$ 12/25 perches, or
$40\times15\times2\times.0404=48.48$.

## How to Find the Number of Cords of Stone in a Pile

RULE: Multiply together the length, width and height in feet and divide by 128.

EXAMPLE: How many cord of stone in a pile 24 feet long, 8 feet wide, and 4 feet high?

SOLUTION: $24\times8\times4\div128=6$ cord.

## Brick-Work

Bricks are of different sizes, varying according to custom of State or locality. The Baltimore Brick is 8¼ x 4⅛ x 2⅜ inches; the Maine brick 7½ x 3⅜ x 2⅜ inches; the Michigan brick 8½ x 4⅛ x 2⅜ inches; the New York brick 8 x 3½ x 2¼ inches, and the Fire brick 9⅛ x 4⅝ x 2¾ inches. They are estimated and sold by the thousand. A common brick is 8 inches long, 4 inches wide and 2 inches thick, and contains 64 cubic inches. Twenty-seven bricks make one cubic foot of wall without mortar, or 22½ bricks one cubic foot with mortar, the mortar filling about 1/6 of the space.

Five courses of common brick with mortar equal one foot in height on a chimney.

Laid flat it takes 4½ bricks to a square foot; on edge it requires 9.

One cubic foot of brick work with common mortar weighs from 100 to 110 pounds.

A bricklayers hod will hold 20 common bricks; the ordinary load, however, is 16 walling or 12 facing bricks.

One cask or barrel of lime mixed with ⅝ yards of sand will make sufficient mortar to lay 1,000 bricks.

### How to Find the Number of Common Bricks in a Wall or Building

RULE: Multiply together the length, height and thickness of the wall in feet and the result again by 22½ and the product will be the number of bricks in the wall.

For a wall 8 inches thick, multiply the length and height in feet together and that result by 14 and the product will equal the number of bricks.

When doors and windows occur in the wall, multiply their height, width and thickness together, and deduct the result from the solid contents of the wall before multiplying by 22½ or 14 as the case may be.

EXAMPLE: How many bricks in a wall 60 feet long, 15 feet high and 2 feet thick?

SOLUTION: 60 x 15 x 2 x 22½=40,500 bricks.

EXAMPLE: How many bricks in a wall 40 feet long, 10 feet high, and 8 inches thick?

SOLUTION: 40 x 10 x 14=5,600 bricks.

## Lathing

Lathing is estimated by the square yard. One-half the surface of openings is usually deducted.

Laths are 4 feet long 1½ inches wide and are put up in bundles of 50 each. Placed about ⅜ of an inch apart 16 are estimated to the square yard or a bundle to 3 square yards.

**How to Find the Number of Laths to Cover a Room**

RULE: Find the number of square yards in the room and multiply by 16; the result will equal the number of laths necessary to cover the room.

EXAMPLE: How many laths required for a room 12 x 10 feet and 9 feet high?

12 x 2 plus 10 x 2 equals 44 feet distance around room.

44 x 9÷9 equals 44 square yards for walls.

12 x 10÷9 equals 13 1/3 square yards for ceiling.

44 plus 13 1/3 x16 equals 917 laths or 18 1/3 bundles.

## Plastering

Plastering is usually figured by the square yard.

Six bushels of lime, 40 cubic feet of sand and 1½ bushels of hair will plaster 100 square yards with two coats of mortar.

One-third of a barrel of stucco will hard-finish 100 square yards of plastering.

In plastering, deductions for openings such as doors, and windows are usually not allowed, because the extra work of finishing around them balances the material saved. However, some deduct one-half the surface of the openings.

**How to Figure the Cost of Plastering a Room**

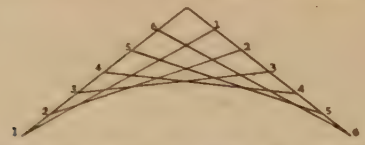
RULE: Multiply the sum of the length and width of the room in feet by 2 for the distance around it and this product by the height dividing the result by 9 for the number of square yards in the walls. Then multiply the length and width of the room in feet together, and divide by 9 for the number of square yards in the ceiling.

Add the two results and multiply by the price per square yard and you have the cost of plastering the room.

EXAMPLE: What would it cost to plaster a room 22 feet long, 18 feet wide and 9 feet high at 50 cents per square yard?

SOLUTION: 22 plus 18 x 2 equals 80 distance around room.
80 x 9÷9=80 No. of square yards in walls.
22 x 18÷9=44 No. of square yards in ceiling.
80 plus 44×50 equals $62.00.

### How to Make the Curves for Brick and Stone Arches




Measure the width, and draw the figure as above. If the points in 1, 2, 3, 4, etc., are equal on both sides, the curve will be an exact part of a circle.

## Definitions for Mechanics

An angle is the opening between two lines that have a different direction.

When two straight lines cross each other so as to form four equal angles, each angle is called a right angle.

An acute angle is less than a right angle. An obtuse angle is greater than a right angle.

A triangle is a figure having three sides.

A surface having four straight lines and four right angles is called a rectangle.

A rectangle whose sides are equal is called a square.

The perimeter of a figure is the distance around it.

An arc is any part of the circumference of a circle.

A chord is a line drawn through the circle and ending on the circumference.

A quadrant is a quarter circle.

A tangent is a line that touches a circle but does not cut it.

A polygon is a figure bounded by straight lines.

The following figures show the principal polygons used with numbers of sides of each:

Pentagon. Hexagon. Heptagon. Octagon. Nonagon. Decagon.

Concentric circles are circles that have the same center and the space included between their circumference is called a ring.

## Useful and Practical Rules for Mechanics

### To Find the Diagonal of a Square.

Multiply the side of the square by 1.41421.

### To Find the Circumference of a Circle.

Multiply the diameter by 3 1/7 or multiply the area by 12.566 and extract the square root of the product.

### To Find the Area of a Circle.

Multiply the square of the radius by 3 1/7.

The radius is one-half the diameter.

### To Find the Diameter of a Circle.

Divide the circumference by 3 1/7.

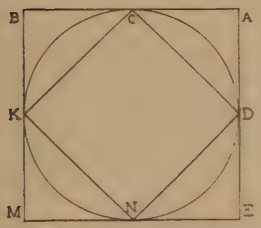
### To Draw a Circle Through Three Points.

Let the three points be A, B and C. Join A and B and B and C by straight lines. At the middle points of these lines draw lines perpendicular to them. This can easily be done by using a square. Produce these lines and let them meet at O. O is the center of the circle. With O as center and OA as radius construct the circle.

### To Find the Area of any Polygon.

Find the center of the figure and multiply distance around the figure (perimeter) by one-half of the diameter and the result will equal the area.

### Inscribed and Circumscribed Squares.




The square described within the circle is exactly half as large as the square described outside of the circle, that is the described one is one half the area of the circumscribed square.

The square C D N K contains exactly one-half the area of the square A C M B.

It is thus easily seen that the area of the circumscribed square—(that is the square A C M B) is equal to the square of the diameter of the circle.

### How to Lay Off Small Lots of Land.

Farmers and gardners often find it necessary to lay off small portions of land for the purpose of experimenting with different crops, fertilizers, etc. To such the following rules will be helpful:

One acre contains 160 sq. rods, or 4,840 sq. yards, or 43,560 sq. feet.
One acre it will take 208 7/10 feet each way.
One-half acre it will take 147½ feet each way.
One-third acre it will take 120½ feet each way.
One-fourth acre it will take 104⅞ feet each way.
One-eighth acre it will take 73¾ feet each way.

### How to Make an Ice Chest.

Take two dry goods boxes, one enough smaller than the other to leave a space of three or four inches all around when placed inside the larger box. Pack this space between the two boxes closely with sawdust and make a heavy cover to fit neatly inside the top of the larger box. A small pipe inserted in the bottom of the chest will carry off the waste water. For family use and all ordinary purposes it will be as serviceable as refrigerators costing twenty-five times as much.

## Rules for Measuring Lumber

1. A FOOT OF LUMBER is one foot long, one foot wide and one inch thick. This is called a Board Foot.
2. PIECE STUFF OR DIMENSION STUFF is lumber that is two or more inches thick and of uniform width and length.
3. SCANTLING is usually from three to four inches wide and from two to four inches thick.
4. JOIST is two-inch lumber of any width.
5. PLANK is two inches in thickness and wider than a scantling.

Rule for 12-foot Boards: Find the width of the boards in inches and add together, and the sum obtained will be equal to the number of feet in the pile. (Each inch in width equals one foot of lumber.)

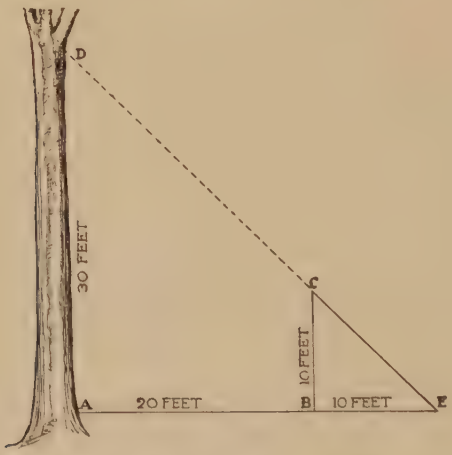
Note: Use no fractions. If a board is between 9 and 10 inches wide, but nearer 9 than 10, call it 9; if nearer 10 than 9, call it 10. If it is 9½, call it either 9 or 10.

For 14-foot boards add the width of the boards in inches, and to the sum add 1/6 of itself, and the result will equal the number of feet in the pile.

For 16-foot lumber, add the width of the boards in inches and to that sum add 1/3 of itself, and you will have the number of feet in the pile.

Example: How many feet of lumber in ten boards, 9 inches wide and 16 feet long?

SOLUTION: 10×9=90.
1/3 of 90=30.
30+90=120, the number of feet.




**How to Find the Height of a Tree.**

Suppose you desire a log 30 feet long—measure off from the base of the tree 30 feet—(allow for the height of the stump), then measure 10 feet back, and put your 10-foot pole at B; let some one hold it the height of the stump from the ground, then put your eye at E, looking over the top of the pole at C, and where the eye strikes the tree at D, will be 30 feet from A.

N. B.—This rule will apply to any tree, or any height. The principles hold true in any case.

**How to Find the Height by Measuring the Shadow.**

RULE: Measure a pole, and hold it perpendicular in the sun, and measure its shadow, then measure the shadow of the tree whose height is desired. Then multiply the length of the pole by the length of the tree's shadow, and divide the product by the length of the shadow of the pole, and the result will be the height of the tree.

EXAMPLE: If a pole 3 feet long casts a shadow 4½ feet long, what is the height of a tree whose shadow measures 180 feet?

SOLUTION: 180x3÷4½=120 feet, the height of the tree.

**How to Ascertain the Number of Feet (Board Measure) in a Log.**

## Joist, Scantling and Timber Measurement

| Size in Inches | Length in Feet | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 |
| 2 x 4 | 8 | 9⅓ | 10⅔ | 12 | 13⅓ | 14⅔ | 16 | 17⅓ | 18⅔ | 20 |
| 2 x 6 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 |
| 2 x 8 | 16 | 18⅔ | 21⅓ | 24 | 26⅔ | 29⅓ | 32 | 34⅔ | 37⅓ | 40 |
| 2 x 10 | 20 | 23⅓ | 26⅔ | 30 | 33⅓ | 36⅔ | 40 | 43⅓ | 46⅔ | 50 |
| 2 x 12 | 24 | 28 | 32 | 36 | 40 | 44 | 48 | 52 | 56 | 60 |
| 3 x 4 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 |
| 3 x 6 | 18 | 21 | 24 | 27 | 30 | 33 | 36 | 39 | 42 | 45 |
| 3 x 8 | 24 | 28 | 32 | 36 | 40 | 44 | 48 | 52 | 56 | 60 |
| 3 x 10 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 |
| 3 x 12 | 36 | 42 | 48 | 54 | 60 | 66 | 72 | 78 | 84 | 90 |
| 4 x 4 | 16 | 18⅔ | 21⅓ | 24 | 26⅔ | 29⅓ | 32 | 34⅔ | 37⅓ | 40 |
| 4 x 6 | 24 | 28 | 32 | 36 | 40 | 44 | 48 | 52 | 56 | 60 |
| 4 x 8 | 32 | 37⅓ | 42⅔ | 48 | 53⅓ | 58⅔ | 64 | 69⅓ | 74⅔ | 80 |
| 4 x 10 | 40 | 46⅔ | 53⅓ | 60 | 66⅔ | 73⅓ | 80 | 86⅔ | 93⅓ | 100 |
| 4 x 12 | 48 | 56 | 64 | 72 | 80 | 88 | 96 | 104 | 112 | 120 |
| 6 x 6 | 36 | 42 | 48 | 54 | 60 | 66 | 72 | 78 | 84 | 90 |
| 6 x 8 | 48 | 56 | 64 | 72 | 80 | 88 | 96 | 104 | 112 | 120 |
| 6 x 10 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 |
| 6 x 12 | 72 | 84 | 96 | 108 | 120 | 136 | 144 | 156 | 168 | 180 |
| 8 x 8 | 64 | 74⅔ | 85⅓ | 96 | 106⅔ | 117⅓ | 128 | 138⅔ | 149⅓ | 160 |
| 8 x 10 | 80 | 93⅓ | 106⅔ | 120 | 133⅓ | 146⅔ | 160 | 173⅓ | 186⅔ | 200 |
| 8 x 12 | 96 | 112 | 128 | 144 | 160 | 176 | 192 | 208 | 224 | 240 |
| 10 x 10 | 100 | 116⅔ | 133⅓ | 150 | 166⅔ | 183⅓ | 200 | 216⅔ | 233⅓ | 250 |
| 10 x 12 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 |
| 12 x 12 | 144 | 168 | 192 | 216 | 240 | 264 | 288 | 312 | 336 | 360 |
| 12 x 14 | 168 | 196 | 224 | 252 | 280 | 308 | 336 | 364 | 392 | 420 |
| 14 x 14 | 196 | 228⅔ | 261⅓ | 294 | 226⅔ | 359⅓ | 392 | 424⅔ | 457⅓ | 490 |

*Example:* A timber 12 by 14 inches, 18 feet long, contains 252 square feet.

## How to Find Number of Feet (Board Measure) in a Log

RULE: Subtract from the diameter of the log in inches, 4 inches (for slabs); one-fourth of this result squared and multiplied by the length in feet will give the correct amount of lumber made from any log.

EXAMPLE: How many feet of lumber can be made from a log which is 36 inches in diameter and 10 feet long?

SOLUTION: From 36 (diameter) subtract 4 (for slabs)=32. Take ¼ of 32=8, which multiplied by itself equals 64. Then multiply 64 by 10 (length)=640. Ans.

ROPP'S RULE: Square the diameter in inches and subtract 60 from the result, then multiply this result by the length and divide by 2, and cut off the right hand figure.

See tables on pages 492 and 493.

## Eastern Log Table

(For larger logs see table on page 354.)

| Ft. long | Dia. 6 | Dia. 7 | Dia. 8 | Dia. 9 | Dia. 10 | Dia. 11 | Dia. 12 | Dia. 13 | Dia. 14 | Dia. 15 | Dia. 16 | Dia. 17 | Dia. 18 | Dia. 19 | Dia. 20 | Dia. 21 | Dia. 22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 15 | 20 | 25 | 30 | 35 | 40 | 49 | 61 | 72 | 89 | 99 | 116 | 133 | 150 | 175 | 190 | 209 |
| 11 | 16 | 22 | 27 | 33 | 38 | 44 | 54 | 67 | 79 | 98 | 109 | 127 | 147 | 165 | 192 | 209 | 230 |
| 12 | 18 | 24 | 30 | 36 | 42 | 48 | 59 | 73 | 86 | 107 | 119 | 139 | 160 | 180 | 210 | 228 | 251 |
| 13 | 19 | 25 | 32 | 39 | 45 | 52 | 64 | 79 | 93 | 116 | 129 | 150 | 173 | 195 | 227 | 247 | 272 |
| 14 | 21 | 28 | 35 | 42 | 49 | 56 | 69 | 85 | 100 | 125 | 139 | 162 | 187 | 210 | 245 | 266 | 292 |
| 15 | 22 | 30 | 37 | 45 | 52 | 60 | 74 | 91 | 107 | 134 | 14 | 173 | 200 | 225 | 262 | 285 | 313 |
| 16 | 24 | 32 | 40 | 48 | 56 | 64 | 79 | 97 | 114 | 142 | 159 | 185 | 213 | 240 | 280 | 304 | 334 |
| 17 | 25 | 34 | 42 | 51 | 59 | 68 | 84 | 103 | 122 | 151 | 168 | 19 | 227 | 255 | 297 | 323 | 355 |
| 18 | 27 | 36 | 45 | 54 | 63 | 72 | 88 | 109 | 129 | 160 | 178 | 208 | 240 | 270 | 315 | 349 | 376 |
| 19 | 28 | 38 | 47 | 57 | 66 | 76 | 93 | 116 | 136 | 169 | 188 | 219 | 253 | 285 | 332 | 361 | 397 |
| 20 | 30 | 40 | 50 | 60 | 70 | 80 | 98 | 122 | 143 | 178 | 198 | 232 | 267 | 300 | 350 | 380 | 418 |
| 21 | 31 | 42 | 52 | 63 | 73 | 84 | 103 | 128 | 150 | 187 | 208 | 243 | 280 | 315 | 368 | 399 | 439 |
| 22 | 33 | 44 | 55 | 66 | 77 | 88 | 108 | 134 | 157 | 196 | 218 | 255 | 293 | 330 | 385 | 418 | 460 |
| 23 | 34 | 45 | 57 | 69 | 80 | 92 | 113 | 140 | 164 | 205 | 228 | 266 | 307 | 345 | 403 | 437 | 480 |
| 24 | 36 | 48 | 60 | 72 | 84 | 96 | 118 | 146 | 172 | 214 | 238 | 278 | 320 | 360 | 420 | 456 | 501 |
| 25 | 37 | 50 | 62 | 75 | 87 | 100 | 123 | 152 | 179 | 223 | 248 | 289 | 333 | 375 | 438 | 475 | 522 |

## Cubical Contents of Round Lumber

| Ft. long | Dia. 6 | Dia. 7 | Dia. 8 | Dia. 9 | Dia. 10 | Dia. 11 | Dia. 12 | Dia. 13 | Dia. 14 | Dia. 15 | Dia. 16 | Dia. 17 | Dia. 18 | Dia. 19 | Dia. 20 | Dia. 21 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 1.57 | 2.14 | 2.79 | 3.53 | 4 | 5 | 6 | 7 | 8 | 10 | 11 | 12 | 14 | 16 | 17 | 19 |
| 9 | 1.76 | 2.40 | 3.14 | 3.97 | 5 | 6 | 7 | 8 | 9 | 11 | 12 | 14 | 16 | 18 | 20 | 22 |
| 10 | 1.96 | 2.67 | 3.49 | 4 42 | 5 | 7 | 8 | 9 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
| 11 | 2.16 | 2.94 | 3.84 | 4.86 | 6 | 7 | 8 | 10 | 12 | 13 | 15 | 17 | 19 | 22 | 24 | 26 |
| 12 | 2.35 | 3.20 | 4.19 | 5.30 | 6 | 8 | 9 | 11 | 13 | 15 | 17 | 19 | 21 | 24 | 26 | 29 |
| 13 | 2.55 | 3.47 | 4.54 | 5.74 | 7 | 9 | 10 | 12 | 14 | 16 | 18 | 20 | 23 | 26 | 28 | 31 |
| 14 | 2.75 | 3.74 | 4.89 | 6.19 | 7 | 9 | 11 | 13 | 15 | 17 | 19 | 22 | 25 | 28 | 31 | 34 |
| 15 | 2.94 | 4.05 | 5.24 | 6.63 | 8 | 10 | 12 | 14 | 16 | 18 | 21 | 23 | 26 | 30 | 33 | 36 |
| 16 | 3.14 | 4.27 | 5.58 | 7.07 | 9 | 11 | 12 | 14 | 17 | 20 | 22 | 25 | 28 | 32 | 35 | 38 |
| 17 | 3.33 | 4.54 | 5.93 | 7.51 | 9 | 11 | 13 | 16 | 18 | 21 | 24 | 27 | 30 | 33 | 37 | 41 |
| 18 | 3.53 | 4.81 | 6.28 | 7.95 | 10 | 12 | 14 | 16 | 19 | 22 | 25 | 28 | 32 | 35 | 39 | 43 |
| 19 | 3.73 | 5.07 | 6.63 | 8.39 | 10 | 13 | 15 | 17 | 21 | 23 | 27 | 30 | 33 | 37 | 41 | 45 |
| 20 | 3.92 | 5.34 | 6.98 | 8.84 | 11 | 13 | 16 | 18 | 21 | 25 | 28 | 31 | 35 | 39 | 44 | 48 |

| Ft. long | Dia. 22 | Dia. 23 | Dia. 24 | Dia. 25 | Dia. 26 | Dia. 27 | Dia. 28 | Dia. 29 | Dia. 30 | Dia. 31 | Dia. 32 | Dia. 33 | Dia. 34 | Dia. 35 | Dia. 36 | Dia. 37 | Dia. 38 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 21 | 23 | 25 | 27 | 29 | 32 | 34 | 37 | 39 | 42 | 45 | 48 | 50 | 53 | 57 | 60 | 62 |
| 9 | 24 | 26 | 28 | 31 | 33 | 36 | 38 | 41 | 44 | 47 | 50 | 53 | 57 | 60 | 64 | 67 | 70 |
| 10 | 26 | 29 | 31 | 34 | 37 | 40 | 43 | 46 | 49 | 52 | 56 | 59 | 63 | 67 | 71 | 75 | 79 |
| 11 | 29 | 32 | 35 | 37 | 41 | 43 | 47 | 50 | 53 | 57 | 61 | 65 | 69 | 73 | 77 | 82 | 86 |
| 12 | 32 | 34 | 38 | 41 | 44 | 47 | 51 | 55 | 58 | 62 | 67 | 71 | 76 | 80 | 85 | 90 | 94 |
| 13 | 34 | 37 | 41 | 44 | 48 | 51 | 55 | 60 | 63 | 68 | 72 | 77 | 82 | 87 | 92 | 97 | 102 |
| 14 | 37 | 40 | 44 | 48 | 52 | 55 | 60 | 64 | 68 | 73 | 78 | 83 | 88 | 94 | 99 | 105 | 110 |
| 15 | 40 | 43 | 47 | 51 | 55 | 59 | 64 | 69 | 73 | 78 | 84 | 89 | 95 | 100 | 106 | 112 | 118 |
| 16 | 42 | 45 | 50 | 55 | 59 | 63 | 68 | 73 | 78 | 83 | 89 | 95 | 101 | 107 | 113 | 119 | 126 |
| 17 | 45 | 49 | 53 | 58 | 63 | 68 | 73 | 78 | 83 | 89 | 95 | 101 | 107 | 114 | 121 | 127 | 135 |
| 18 | 48 | 52 | 57 | 61 | 66 | 72 | 77 | 82 | 88 | 94 | 100 | 106 | 114 | 120 | 128 | 134 | 143 |
| 19 | 50 | 55 | 60 | 65 | 70 | 75 | 81 | 87 | 93 | 99 | 106 | 112 | 120 | 127 | 135 | 142 | 152 |
| 20 | 53 | 58 | 63 | 68 | 74 | 79 | 85 | 91 | 98 | 105 | 112 | 118 | 126 | 134 | 142 | 149 | 151 |

If a log is longer than given in table, unite two numbers. Thus if it is 38 feet, double the product of 19.

## How to Reduce Logs to Inch Board Measure

| Ft. Long | Diam. 10. | Diam. 11. | Diam. 12. | Diam. 13. | Diam. 14. | Diam. 15. | Diam. 16. | Diam. 17. | Diam. 18. | Diam. 19. | Diam. 20. | Diam. 21. | Diam. 22. | Diam. 23. | Diam. 24. | Diam. 25. | Diam. 26. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 23 | 31 | 40 | 50 | 62 | 75 | 90 | 105 | 122 | 140 | 160 | 180 | 202 | 225 | 250 | 275 | 302 |
| 11 | 25 | 34 | 44 | 55 | 69 | 83 | 99 | 116 | 135 | 154 | 176 | 198 | 223 | 248 | 275 | 302 | 333 |
| 12 | 27 | 37 | 48 | 61 | 75 | 91 | 108 | 126 | 147 | 169 | 192 | 217 | 243 | 271 | 300 | 331 | 363 |
| 13 | 29 | 40 | 52 | 66 | 81 | 98 | 117 | 137 | 159 | 183 | 208 | 235 | 263 | 293 | 325 | 358 | 393 |
| 14 | 32 | 43 | 56 | 71 | 88 | 106 | 126 | 148 | 171 | 197 | 224 | 253 | 283 | 313 | 350 | 386 | 433 |
| 15 | 34 | 46 | 60 | 76 | 94 | 113 | 135 | 158 | 184 | 211 | 240 | 271 | 303 | 336 | 375 | 413 | 453 |
| 16 | 36 | 49 | 64 | 81 | 100 | 121 | 144 | 169 | 196 | 225 | 256 | 289 | 324 | 359 | 400 | 441 | 484 |
| 17 | 38 | 52 | 68 | 86 | 106 | 128 | 153 | 179 | 208 | 239 | 272 | 307 | 344 | 383 | 425 | 468 | 514 |
| 18 | 41 | 55 | 72 | 91 | 112 | 136 | 162 | 190 | 220 | 253 | 288 | 325 | 364 | 406 | 450 | 496 | 544 |
| 19 | 43 | 58 | 76 | 96 | 119 | 143 | 171 | 201 | 232 | 267 | 304 | 343 | 384 | 429 | 475 | 523 | 574 |
| 20 | 45 | 61 | 80 | 101 | 125 | 151 | 180 | 211 | 244 | 280 | 320 | 361 | 404 | 452 | 500 | 550 | 605 |
| 21 | 47 | 64 | 84 | 106 | 131 | 158 | 189 | 222 | 257 | 295 | 336 | 379 | 425 | 473 | 525 | 579 | 635 |
| 22 | 50 | 66 | 88 | 111 | 137 | 166 | 198 | 232 | 269 | 309 | 352 | 397 | 445 | 496 | 550 | 605 | 665 |
| 23 | 52 | 70 | 92 | 116 | 144 | 174 | 207 | 243 | 281 | 323 | 368 | 415 | 465 | 519 | 575 | 632 | 695 |
| 24 | 54 | 74 | 96 | 122 | 150 | 181 | 216 | 254 | 294 | 338 | 384 | 433 | 486 | 541 | 600 | 662 | 726 |
| 25 | 56 | 77 | 100 | 127 | 156 | 189 | 225 | 264 | 308 | 351 | 400 | 451 | 506 | 562 | 625 | 689 | 756 |

| Ft. Long | Diam. 27. | Diam. 28. | Diam. 29. | Diam. 30. | Diam. 31. | Diam. 32. | Diam. 33. | Diam. 34. | Diam. 35. | Diam. 36. | Diam. 37. | Diam. 38. | Diam. 39. | Diam. 40. | Diam. 41. | Diam. 42. | Diam. 43. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 330 | 360 | 391 | 422 | 456 | 490 | 526 | 562 | 601 | 640 | 681 | 723 | 765 | 810 | 850 | 903 | 952 |
| 11 | 363 | 396 | 430 | 465 | 502 | 539 | 578 | 619 | 661 | 704 | 749 | 795 | 842 | 891 | 942 | 994 | 1064 |
| 12 | 397 | 432 | 469 | 507 | 547 | 588 | 631 | 675 | 721 | 768 | 817 | 867 | 910 | 972 | 1027 | 1083 | 1141 |
| 13 | 430 | 468 | 508 | 549 | 592 | 637 | 684 | 731 | 781 | 832 | 884 | 939 | 996 | 1053 | 1113 | 1173 | 1237 |
| 14 | 463 | 504 | 547 | 591 | 638 | 686 | 736 | 787 | 841 | 896 | 953 | 1011 | 1070 | 1134 | 1198 | 1264 | 1331 |
| 15 | 496 | 540 | 586 | 633 | 683 | 735 | 789 | 844 | 901 | 960 | 1021 | 1083 | 1199 | 1215 | 1284 | 1354 | 1426 |
| 16 | 530 | 576 | 625 | 676 | 729 | 784 | 842 | 900 | 961 | 1024 | 1089 | 1156 | 1225 | 1296 | 1369 | 1444 | 1521 |
| 17 | 563 | 612 | 664 | 718 | 774 | 833 | 895 | 956 | 1021 | 1088 | 1157 | 1228 | 1302 | 1377 | 1455 | 1534 | 1616 |
| 18 | 596 | 648 | 703 | 761 | 820 | 882 | 946 | 1012 | 1081 | 1152 | 1225 | 1300 | 1379 | 1458 | 1541 | 1625 | 1711 |
| 19 | 620 | 684 | 742 | 803 | 865 | 931 | 999 | 1069 | 1141 | 1216 | 1293 | 1372 | 1455 | 1539 | 1626 | 1715 | 1806 |
| 20 | 661 | 720 | 782 | 845 | 912 | 980 | 1052 | 1125 | 1202 | 1280 | 1361 | 1446 | 1530 | 1620 | 1712 | 1805 | 1902 |
| 21 | 693 | 756 | 820 | 887 | 957 | 1029 | 1103 | 1181 | 1261 | 1344 | 1430 | 1518 | 1607 | 1701 | 1792 | 1896 | 1997 |
| 22 | 726 | 792 | 860 | 930 | 1004 | 1078 | 1156 | 1238 | 1322 | 1408 | 1497 | 1590 | 1684 | 1782 | 1882 | 1986 | 2091 |
| 23 | 760 | 828 | 898 | 972 | 1049 | 1127 | 1209 | 1295 | 1381 | 1472 | 1566 | 1662 | 1761 | 1863 | 1969 | 2077 | 2187 |
| 24 | 794 | 864 | 938 | 1014 | 1094 | 1176 | 1262 | 1350 | 1442 | 1536 | 1634 | 1734 | 1838 | 1944 | 2055 | 2166 | 2282 |
| 25 | 827 | 900 | 977 | 1056 | 1139 | 1225 | 1315 | 1406 | 1501 | 1600 | 1702 | 1806 | 1915 | 2025 | 2139 | 2256 | 2376 |

## How to Use the Log Table

First find the average diameter of the log by adding together the two ends of the log, in inches; then divide by two, and the result will equal the average diameter, and then apply the above table.

EXAMPLE: How many feet of lumber are there in a log 15 inches at one end and 21 inches at the other, and 22 feet long?

SOLUTION: 15+21=36; one-half of 36=18 inches, the average diameter.

Then refer to the column under 18 inches opposite to 22 and you will find the answer—269 feet.

## Board and Plank Measurement—at Sight

This table gives the sq. ft. and inches in boards from 4 to 27 in. wide, and from 8 to 36 ft. long. If a board be longer than 36 ft., unite two numbers. Thus, if a board is 40 ft. long and 16 in. wide, add 30 and 10 and you have 53 ft. 4 inches. For 2 inch plank double the product.

| Ft. long | 4 in. w. | | 5 in. w. | | 6 in. w. | | 7 in. w. | | 8 in. w. | | 9 in. w. | | 10 in. w. | | 11 in. w. | | 12 in. w. | | 13 in. w. | | 14 in. w. | | 15 in. w. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ft. | in. | ft. | in. | ft. | in. | ft. | in. | ft. | in. | ft. | in. | ft. | in. | ft. | in. | ft. | in. | ft. | in. | ft. | in. | ft. | in. |
| 8 | 2 | 8 | 3 | 4 | 4 | 0 | 4 | 8 | 5 | 4 | 6 | 0 | 6 | 8 | 7 | 4 | 8 | 0 | 8 | 8 | 9 | 4 | 10 | 0 |
| 9 | 3 | 0 | 3 | 9 | 4 | 6 | 5 | 3 | 6 | 0 | 6 | 9 | 7 | 6 | 8 | 3 | 9 | 0 | 9 | 9 | 10 | 6 | 11 | 3 |
| 10 | 3 | 4 | 4 | 2 | 5 | 0 | 5 | 10 | 6 | 8 | 7 | 6 | 8 | 4 | 9 | 2 | 10 | 0 | 10 | 10 | 11 | 8 | 12 | 6 |
| 11 | 3 | 8 | 4 | 7 | 5 | 6 | 6 | 5 | 7 | 4 | 8 | 3 | 9 | 2 | 10 | 1 | 11 | 0 | 11 | 11 | 12 | 10 | 13 | 9 |
| 12 | 4 | 0 | 5 | 0 | 6 | 0 | 7 | 0 | 8 | 0 | 9 | 0 | 10 | 0 | 11 | 0 | 12 | 0 | 13 | 0 | 14 | 0 | 15 | 0 |
| 13 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | 10 | 11 | 11 | 13 | 0 | 14 | 1 | 15 | 2 | 16 | 3 |
| 14 | 4 | 8 | 5 | 10 | 7 | 0 | 8 | 2 | 9 | 4 | 10 | 6 | 11 | 8 | 12 | 10 | 14 | 0 | 15 | 2 | 16 | 4 | 17 | 6 |
| 15 | 5 | 0 | 6 | 3 | 7 | 6 | 8 | 9 | 10 | 0 | 11 | 3 | 12 | 6 | 13 | 9 | 15 | 0 | 16 | 3 | 17 | 6 | 18 | 9 |
| 16 | 5 | 4 | 6 | 8 | 8 | 0 | 9 | 4 | 10 | 8 | 12 | 0 | 13 | 4 | 14 | 8 | 16 | 0 | 17 | 4 | 18 | 8 | 20 | 0 |
| 17 | 5 | 8 | 7 | 1 | 8 | 6 | 9 | 11 | 11 | 4 | 12 | 9 | 14 | 2 | 15 | 7 | 17 | 0 | 18 | 5 | 19 | 10 | 21 | 3 |
| 18 | 6 | 0 | 7 | 6 | 9 | 0 | 10 | 6 | 12 | 0 | 13 | 6 | 15 | 0 | 16 | 6 | 18 | 0 | 19 | 6 | 21 | 0 | 22 | 6 |
| 19 | 6 | 4 | 7 | 11 | 9 | 6 | 11 | 1 | 12 | 8 | 14 | 3 | 15 | 10 | 17 | 5 | 19 | 0 | 20 | 7 | 22 | 2 | 23 | 9 |
| 20 | 6 | 8 | 8 | 4 | 10 | 0 | 11 | 8 | 13 | 4 | 15 | 0 | 16 | 8 | 18 | 4 | 20 | 0 | 21 | 8 | 23 | 4 | 25 | 0 |
| 21 | 7 | 0 | 8 | 9 | 10 | 6 | 12 | 3 | 14 | 0 | 15 | 9 | 17 | 6 | 19 | 3 | 21 | 0 | 22 | 9 | 24 | 6 | 26 | 3 |
| 22 | 7 | 4 | 9 | 2 | 11 | 0 | 12 | 10 | 14 | 8 | 16 | 6 | 18 | 4 | 20 | 2 | 22 | 0 | 23 | 10 | 25 | 8 | 27 | 6 |
| 23 | 7 | 8 | 9 | 7 | 11 | 6 | 13 | 5 | 15 | 4 | 17 | 3 | 19 | 2 | 21 | 1 | 23 | 0 | 24 | 11 | 26 | 10 | 28 | 9 |
| 24 | 8 | 0 | 10 | 0 | 12 | 0 | 14 | 0 | 16 | 0 | 18 | 0 | 20 | 0 | 22 | 0 | 24 | 0 | 26 | 0 | 28 | 0 | 30 | 0 |
| 25 | 8 | 4 | 10 | 5 | 12 | 6 | 14 | 7 | 16 | 8 | 18 | 9 | 20 | 10 | 22 | 11 | 25 | 0 | 27 | 1 | 29 | 2 | 31 | 3 |
| 26 | 8 | 8 | 10 | 10 | 13 | 0 | 15 | 2 | 17 | 4 | 19 | 6 | 21 | 8 | 23 | 10 | 26 | 0 | 28 | 2 | 30 | 4 | 32 | 6 |
| 27 | 9 | 0 | 11 | 3 | 13 | 6 | 15 | 9 | 18 | 0 | 20 | 3 | 22 | 6 | 24 | 9 | 27 | 0 | 29 | 3 | 31 | 6 | 33 | 9 |
| 28 | 9 | 4 | 11 | 8 | 14 | 0 | 16 | 4 | 18 | 8 | 21 | 0 | 23 | 4 | 25 | 8 | 28 | 0 | 30 | 4 | 32 | 8 | 35 | 0 |
| 29 | 9 | 8 | 12 | 1 | 14 | 6 | 16 | 11 | 19 | 4 | 21 | 9 | 24 | 2 | 26 | 7 | 29 | 0 | 31 | 5 | 33 | 10 | 36 | 3 |
| 30 | 10 | 0 | 12 | 6 | 15 | 0 | 17 | 6 | 20 | 0 | 22 | 6 | 25 | 0 | 27 | 6 | 30 | 0 | 32 | 6 | 35 | 0 | 37 | 6 |
| 31 | 10 | 4 | 12 | 11 | 15 | 6 | 18 | 1 | 20 | 8 | 23 | 3 | 25 | 10 | 28 | 5 | 31 | 0 | 33 | 7 | 36 | 2 | 38 | 9 |
| 32 | 10 | 8 | 13 | 4 | 16 | 0 | 18 | 8 | 21 | 4 | 24 | 0 | 26 | 8 | 29 | 4 | 32 | 0 | 34 | 8 | 37 | 4 | 40 | 0 |
| 33 | 11 | 0 | 13 | 9 | 16 | 6 | 19 | 3 | 22 | 0 | 24 | 9 | 27 | 6 | 30 | 3 | 33 | 0 | 35 | 9 | 38 | 6 | 41 | 3 |
| 34 | 11 | 4 | 14 | 2 | 17 | 0 | 19 | 10 | 22 | 8 | 25 | 6 | 28 | 4 | 31 | 2 | 34 | 0 | 36 | 10 | 39 | 8 | 42 | 6 |
| 35 | 11 | 8 | 14 | 7 | 17 | 6 | 20 | 5 | 23 | 4 | 26 | 3 | 29 | 2 | 32 | 1 | 35 | 0 | 37 | 11 | 40 | 10 | 43 | 9 |
| 36 | 12 | 0 | 15 | 0 | 18 | 0 | 21 | 0 | 24 | 0 | 27 | 0 | 30 | 0 | 33 | 0 | 36 | 0 | 39 | 0 | 42 | 0 | 45 | 0 |

| Ft. long | 16 in. w. | | 17 in. w. | | 18 in. w. | | 19 in. w. | | 20 in. w. | | 21 in. w. | | 22 in. w. | | 23 in. w. | | 24 in. w. | | 25 in. w. | | 26 in. w. | | 27 in. w. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ft. | in. | ft. | in. | ft. | in. | ft. | in. | ft. | in. | ft. | in. | ft. | in. | ft. | in. | ft. | in. | ft. | in. | ft. | in. | ft. | in. |
| 8 | 10 | 8 | 11 | 4 | 12 | 0 | 12 | 8 | 13 | 4 | 14 | 0 | 14 | 8 | 15 | 4 | 16 | 0 | 16 | 8 | 17 | 4 | 18 | 0 |
| 9 | 12 | 0 | 12 | 9 | 13 | 6 | 14 | 3 | 15 | 0 | 15 | 9 | 16 | 6 | 17 | 3 | 18 | 0 | 18 | 9 | 19 | 6 | 20 | 3 |
| 10 | 13 | 4 | 14 | 2 | 15 | 0 | 15 | 10 | 16 | 8 | 17 | 6 | 18 | 4 | 19 | 2 | 20 | 0 | 20 | 10 | 21 | 8 | 22 | 6 |
| 11 | 14 | 8 | 15 | 7 | 16 | 6 | 17 | 5 | 18 | 4 | 19 | 3 | 20 | 2 | 21 | 1 | 22 | 0 | 22 | 11 | 23 | 10 | 24 | 9 |
| 12 | 16 | 0 | 17 | 0 | 18 | 0 | 19 | 0 | 20 | 0 | 21 | 0 | 22 | 0 | 23 | 0 | 24 | 0 | 25 | 0 | 26 | 0 | 27 | 6 |
| 13 | 17 | 4 | 18 | 5 | 19 | 6 | 20 | 7 | 21 | 8 | 22 | 9 | 23 | 10 | 24 | 11 | 26 | 0 | 27 | 1 | 28 | 2 | 29 | 3 |
| 14 | 18 | 8 | 19 | 10 | 21 | 0 | 22 | 2 | 23 | 4 | 24 | 6 | 25 | 8 | 26 | 10 | 28 | 0 | 29 | 2 | 30 | 4 | 31 | 6 |
| 15 | 20 | 0 | 21 | 3 | 22 | 6 | 23 | 9 | 25 | 0 | 26 | 3 | 27 | 6 | 28 | 9 | 30 | 0 | 31 | 3 | 32 | 6 | 33 | 9 |
| 16 | 21 | 4 | 22 | 8 | 24 | 0 | 25 | 4 | 26 | 8 | 28 | 0 | 29 | 4 | 30 | 8 | 32 | 0 | 33 | 4 | 34 | 8 | 36 | 0 |
| 17 | 22 | 8 | 24 | 1 | 25 | 6 | 26 | 11 | 28 | 4 | 29 | 9 | 31 | 2 | 32 | 7 | 34 | 0 | 35 | 5 | 36 | 10 | 38 | 3 |
| 18 | 24 | 0 | 25 | 6 | 27 | 0 | 28 | 6 | 30 | 0 | 31 | 6 | 33 | 0 | 34 | 6 | 36 | 0 | 37 | 6 | 39 | 0 | 40 | 6 |
| 19 | 25 | 4 | 26 | 11 | 28 | 6 | 29 | 1 | 31 | 8 | 33 | 3 | 34 | 10 | 36 | 5 | 38 | 0 | 39 | 7 | 41 | 2 | 42 | 9 |
| 20 | 26 | 8 | 28 | 4 | 30 | 0 | 31 | 8 | 33 | 4 | 35 | 0 | 36 | 8 | 38 | 4 | 40 | 0 | 41 | 8 | 43 | 4 | 45 | 9 |
| 21 | 28 | 0 | 29 | 9 | 31 | 6 | 33 | 3 | 35 | 0 | 36 | 9 | 38 | 6 | 40 | 3 | 42 | 0 | 43 | 9 | 45 | 6 | 47 | 3 |
| 22 | 29 | 4 | 31 | 2 | 33 | 0 | 34 | 10 | 36 | 8 | 38 | 6 | 40 | 4 | 42 | 2 | 44 | 0 | 45 | 10 | 47 | 8 | 49 | 6 |
| 23 | 30 | 8 | 32 | 7 | 34 | 6 | 36 | 5 | 38 | 4 | 40 | 3 | 42 | 2 | 44 | 1 | 46 | 0 | 47 | 11 | 49 | 10 | 51 | 9 |
| 24 | 32 | 0 | 34 | 0 | 36 | 0 | 38 | 0 | 40 | 0 | 42 | 0 | 44 | 0 | 46 | 0 | 48 | 0 | 50 | 0 | 52 | 0 | 54 | 0 |
| 25 | 33 | 4 | 35 | 5 | 37 | 6 | 39 | 7 | 41 | 8 | 43 | 9 | 45 | 10 | 47 | 11 | 50 | 0 | 52 | 1 | 54 | 2 | 56 | 3 |
| 26 | 34 | 8 | 36 | 10 | 39 | 0 | 41 | 2 | 43 | 4 | 45 | 6 | 47 | 8 | 49 | 10 | 52 | 0 | 54 | 2 | 56 | 4 | 58 | 6 |
| 27 | 36 | 0 | 38 | 3 | 40 | 6 | 42 | 9 | 45 | 0 | 47 | 3 | 49 | 6 | 51 | 9 | 54 | 0 | 56 | 3 | 58 | 6 | 60 | 9 |
| 28 | 37 | 4 | 39 | 8 | 42 | 0 | 44 | 4 | 46 | 8 | 49 | 0 | 51 | 4 | 53 | 8 | 56 | 0 | 58 | 4 | 60 | 8 | 63 | 0 |
| 29 | 38 | 8 | 40 | 1 | 43 | 6 | 45 | 11 | 48 | 4 | 50 | 9 | 53 | 2 | 55 | 7 | 58 | 0 | 60 | 5 | 62 | 10 | 65 | 3 |
| 30 | 40 | 0 | 42 | 6 | 45 | 0 | 47 | 6 | 50 | 0 | 52 | 6 | 55 | 0 | 57 | 6 | 60 | 0 | 62 | 6 | 65 | 0 | 67 | 6 |

## CEMENT AND HOW TO USE IT

The word "Concrete" itself is of Latin origin, meaning "grown together" and implies a body formed by separate particles of different materials combined into a solid mass.

**Kinds of Cement.**—There are two general kinds, Natural and Portland Cement. The raw material from which natural cement is made is found in a natural state and is made by calcining (burning) cement rock, but the temperature required is considerably lower than that needed for making Portland Cement.

**Portland Cement,** however, is the kind used almost exclusively in this country and is manufactured in about 25 different states. The raw materials used by different plants vary greatly, nor is the chemical composition the same, so that it cannot be reduced to a formula.

**What Portland Cement is.**—So far, then, as it is possible to give an accurate definition, Portland cement may be defined as any cement which, on being tested, will manifest the characteristic properties that engineers have agreed to associate with the name "Portland" and which will meet the requirements that have been accepted as standard.

**Raw Materials.**—As a matter of fact, however, the raw materials are limestone (also chalk and marl, which are really forms of limestone), clay, shale and slate, also blast-furnace slag. These in proper proportion are heated to a temperature at which melting begins (2000° to 4000°F). The resulting cement clinker is then ground to an impalpable powder to which a very small percentage of gypsum is added.

## APPROXIMATE MIXTURES ADAPTABLE TO VARIOUS CLASSES OF WORK.

Rich, 1:2:4; Medium, 1:2½:5; Ordinary, 1:3:6; Lean, 1:4:8.

| Kind of Work | Mixture | Consistency |
|---|---|---|
| Abutments | Rich to Ordinary | Medium |
| Arches | Rich to Medium | Medium |
| Backing for Masonry | Lean | Medium to Dry |
| Beams, Reinforced | Rich to Medium | Very Wet |
| Beams, Plain | Rich to Medium | Very Wet to Medium |
| Building Blocks | Rich to Medium | Very Wet to Medium |
| Cisterns | Rich to Medium | Very Wet to Medium |
| Columns, Reinforced | Rich | Very Wet |
| Conduits, Water | Rich | Very Wet |
| Coping | Rich to Medium | Medium |
| Culverts, Reinforced | Medium to Ordinary | Medium |
| Culverts, Plain | Medium to Ordinary | Medium |
| Driveways | Same as Sidewalks | |
| Fence Posts | Rich | Very Wet to Medium |
| Floors, Reinforced | Rich to Ordinary | Very Wet to Medium |
| Floors, Ordinary Ground, | Medium to Ordinary | Medium |
| Footings | Ordinary to Lean | Medium |
| Foundations, Heavy Vibrating Machinery | Rich | Very Wet to Medium |
| Foundations, Ordinary Machinery | Medium | Medium |
| Foundations, Thin Walls | Rich to Medium | Very Wet to Medium |
| Foundations, Thick Walls | Medium to Lean | Medium to Dry |
| Girders, Reinforced | Rich to Medium | Very Wet |
| Girders, Plain | Same as Beams | |
| Gutters | Same as Sidewalks | |
| Pavements | Same as Sidewalks | |
| Piers | Rich to Ordinary | Medium |
| Reservoirs | Rich to Medium | Very Wet to Medium |
| Roof Slabs | Medium to Ordinary | Medium |
| Sewers, Reinforced | Rich to Medium | Medium |
| Sewers, Plain | Medium | Medium |
| Sidewalks (Base) | Medium to Ordinary | Medium to Dry |
| Sidewalks (Sub-Base) | Ordinary to Lean | Medium to Dry |
| Silos | Rich to Medium | Very Wet to Medium |
| Tanks | Rich to Medium | Very Wet to Medium |
| Walls, Dwelling Houses | Rich to Medium | Very Wet to Medium |
| Walls, Large Buildings (Compression and Tension) | Rich to Medium | Very Wet to Medium |
| Walls, Large Buildings (Compression Only) | Medium to Ordinary | Medium |
| Walls, Massive | Medium to Ordinary | Medium |
| Walls, Retaining | Medium to Ordinary | Medium |
| Walls, Thin Foundations | Rich to Medium | Very Wet to Medium |
| Walls, Tunnel | Medium to Ordinary | Medium |

NOTE.—The above facts and table are used by permission of W. A. Radford, editor-in-chief of the "Cement World," etc.

**How to Use Cement.**—In using cement for concrete work it is necessary to mix it with water and aggregates—these aggregates consist of sand, crushed stone or gravel. That is to say, you must use either cement, sand and gravel or cement, sand and crushed stone, or any material that can take the place of gravel or crushed stone. These must be thoroughly mixed and the proper amount of water added.

**The Proportions** required for different kinds of cement or concrete construction are shown on the preceding page. For example for a rich mixture 1:2:4 means one part cement, 2 parts sand and 4 parts gravel or crushed stone.

**By Consistency** is meant the relative wetness of the mixture. VERY WET is mushy enough to run readily off the shovel. MEDIUM WET is wet enough to make it jelly-like. DRY MIXTURE is about like damp earth used generally for foundations, etc.

## Cisterns, Tanks and Barrels

In measuring cisterns, tanks, reservoirs, barrels, etc., the barrel is figured at 31½ gallons and the hogshead at 63 gallons.

A gallon of water weighs about 8 pounds avoirdupois, and contains 231 cubic inches.

A pint is generally estimated as weighing a pound.

**How to Find the Capacity of Round Cisterns and Tanks.**

RULE: Multiply the square of the diameter in feet by the depth in feet and this result by .1865 for the capacity in barrels, or by 5.875 (5⅞) for the capacity in gallons.

EXAMPLE: How many barrels will a round cistern, 5 feet in diameter and 8 feet deep hold? How many gallons?

SOLUTION: 5 x 5 x 8=200.
200 x .1865= 37.3 barrels.
200 x 5.875=1175 gallons.

**How to Find the Capacity of Square Cisterns, Tanks and Watering Troughs.**

RULE: Multiply the length, width and depth in feet together and this product by 7½ (or for exact results by 7.48) and the result will be the number of gallons.

For capacity in barrels multiply by .2375.

For small tanks and troughs reduce feet to inches then multiply the dimensions together and divide result by 231 for gallons.

EXAMPLE: How many gallons will a square cistern 6 x 6 and 8 feet deep hold? How many barrels?

SOLUTION: 6 x 6 x 9=288x7½=2160 gallons.
288 x .2375= 68.4 barrels.

EXAMPLE: What is the capacity of a small watering trough 6 feet long 2 feet wide and 10 inches deep?

SOLUTION: 6 x 12 x 2 x 12 x 10=17280 square inches.
17280 ÷ 231 =75 gallons nearly.

**How to Find the Capacity of a Tapering Round or Square Cistern or Tank.**

RULE: Square both the upper and lower diameter and to the sum of their squares add the product of one diameter multiplied by the other. Divide the result by 3 and multiply by .7854 for the average base of a

round tapering tank. Then multiply this product by the depth in feet and the result by 7.48 for the number of gallons.

Divide this product by 31½ for the number of barrels.

NOTE: For tapering square tanks, and cisterns proceed in the same manner except that the multiplication by .7854 should be omitted.

EXAMPLE: How many gallons will a tapering round tank hold whose lower diameter is 12, upper diameter 8, and depth 10 feet?

12x12=144
8x8 = 64
8x12= 96

3)304

101 1/3

101 1/3 x .7854=79.5872
79.5872 x 10 =795.872
795.872 x 7.48 =5953.12 gallons.

5953.12 ÷ 31.5 =189 barrels.

EXAMPLE: How many gallons in a tapering square tank whose top diameter is 10, bottom diameter 14, and depth 12 feet?

SOLUTION: 10x10=100
14x14=196
10x14=140

3)436

145 1/3

145 1/3 x 12= 1744
1744 x 7.48 =13045.12 gallons.
13045.12 ÷ 31.5= 414.1 barrels.

**How to Find Contents of Barrels and Casks.**

RULE: Add together the diameters of the bung and head in inches and divide by 2 for the mean or average diameter. Then multiply the square of the mean diameter by the length of barrel or cask in inches and this result by 34. Cut off the four right hand figures and it will equal the number of gallons.

EXAMPLE: How many gallons in a barrel whose bung diameter is 22 inches, head diameter 18 inches, and length 30 inches.

SOLUTION: 22+18÷2=20 average diameter.
20x20x30x34=40.8000 or 40 4/5 gallons.

## Table of Capacity of Circular Cisterns and Tanks One Foot in Depth

| Diameter in feet | Capacity in gallons | Capacity in barrels |
|---|---|---|
| 2 | 23 1/2 | 3/4 |
| 3 | 52 7/8 | 1 2/3 |
| 4 | 94 | 3 |
| 5 | 146 7/8 | 4 2/3 |
| 6 | 211 1/2 | 6 7/10 |
| 7 | 287 7/8 | 9 1/8 |
| 8 | 376 | 11 9/10 |
| 9 | 475 7/8 | 15 1/10 |
| 10 | 587 1/2 | 18 2/3 |
| 11 | 710 7/8 | 22 1/2 |
| 12 | 846 | 26 7/8 |

## Table of Capacity of Square Cisterns and Tanks One Foot in Depth

| Dimensions in feet | Capacity in gallons | Capacity in barrels |
|---|---|---|
| 2 x 2 | 29 9/10 | 19/20 |
| 3 x 3 | 67 1/3 | 2 1/8 |
| 4 x 4 | 119 2/3 | 3 4/5 |
| 5 x 5 | 187 | 5 9/10 |
| 6 x 6 | 269 3/10 | 8 1/2 |
| 7 x 7 | 366 1/2 | 11 5/8 |
| 8 x 8 | 478 3/4 | 15 1/5 |
| 9 x 9 | 605 7/8 | 19 1/5 |
| 10 x 10 | 748 | 23 3/4 |
| 11 x 11 | 905 1/12 | 28 3/4 |
| 12 x 12 | 1077 1/8 | 34 1/5 |

To find the capacity of a cistern or tank of any depth multiply its depth in feet by the capacity of one foot in depth as given in the above table.

## Papering

Wall paper is sold by the roll: border by the yard. Single rolls are 24 feet long and 1½ feet or 18 inches wide and contain 36 square feet or 4 square yards.

Double rolls are 48 feet or 16 yards long. Mostly all paper is made up in double rolls.

When a room has many doors and windows their width should be deducted from the total distance around the room before finding the number of strips, but where there are only a few such openings no allowance is made, because there is always waste in cutting the paper.

### How to Find the Required Amount of Paper for a Room

RULE: Measure the distance around the room in feet; deduct the width of doors and windows; 2/3 of the remainder will equal the number of strips required for the walls. Divide this number by the number of strips that can be cut from one roll and it will give the number of rolls required for the walls.

For the ceiling take 2/3 of the width of the room in feet for the number of strips required. Then find how many strips the length of the room can be cut from a roll and divide the number of strips required by the number of strips from one roll which gives the number of rolls necessary for the ceiling. If a fraction is over always add another roll.

When the room is very long it may be a saving to run the strips crosswise. For border divide the distance around the room in feet by 3 for the number of yards.

**EXAMPLE:** How many rolls of paper and yards of border are necessary to paper a room 12 feet long 11 feet wide and 8 feet high?

SOLUTION: 12 x 2 plus 11 x 2 equals 46 feet, distance around room.
46 x 2/3 equals 30 2/3 or 31 strips.
24 feet equals length of 1 roll ÷ 8 height of room equals 3 strips from roll.
31 strips ÷ 3 strips from roll equals 10 1/3 or 11 rolls for walls.
11 × 2/3 equals 7 1/3 or 8 strips for ceiling.
24 ÷ 12 equals 2 strips from 1 roll.
8 ÷ 2 equals 4 rolls for ceiling.
46 ÷ 3 equals 15 1/3 or 16 yards border.

## Wall Paper Table

| Distance Arouud Room, Feet | Double Rolls of Side Wall Necessary Height of Room | | | | | Double Rolls of Ceiling. Add 1 double roll for drop ceiling. | Yards of Border |
|---|---|---|---|---|---|---|---|
| | 8 Feet | 9 Feet | 10 Feet | 11 Feet | 12 Feet | | |
| 30 | 3 | 3 | 4 | 4 | 4 | 1 | 10 |
| 32 | 3 | 3 | 4 | 4 | 5 | 1 | 11 |
| 34 | 3 | 4 | 4 | 5 | 5 | 2 | 12 |
| 36 | 3 | 4 | 4 | 5 | 5 | 2 | 12 |
| 38 | 4 | 4 | 5 | 5 | 6 | 2 | 13 |
| 40 | 4 | 4 | 5 | 6 | 6 | 2 | 14 |
| 42 | 4 | 5 | 5 | 6 | 6 | 2 | 14 |
| 44 | 4 | 5 | 6 | 6 | 7 | 2 | 15 |
| 46 | 5 | 5 | 6 | 6 | 7 | 3 | 16 |
| 48 | 5 | 6 | 6 | 7 | 7 | 3 | 16 |
| 50 | 5 | 6 | 6 | 7 | 8 | 3 | 17 |
| 52 | 5 | 6 | 7 | 7 | 8 | 3 | 18 |
| 54 | 5 | 6 | 7 | 8 | 8 | 3 | 18 |
| 56 | 6 | 7 | 7 | 8 | 9 | 4 | 19 |
| 58 | 6 | 7 | 7 | 8 | 9 | 4 | 20 |
| 60 | 6 | 7 | 8 | 9 | 9 | 4 | 20 |
| 62 | 6 | 7 | 8 | 9 | 10 | 4 | 21 |
| 64 | 7 | 7 | 8 | 9 | 10 | 4 | 22 |
| 66 | 7 | 8 | 9 | 10 | 10 | 5 | 22 |
| 68 | 7 | 8 | 9 | 10 | 11 | 5 | 23 |
| 70 | 7 | 8 | 9 | 10 | 11 | 5 | 24 |
| 72 | 7 | 8 | 9 | 10 | 11 | 6 | 24 |
| 74 | 8 | 9 | 10 | 11 | 12 | 6 | 25 |
| 76 | 8 | 9 | 10 | 11 | 12 | 6 | 26 |
| 78 | 8 | 9 | 10 | 11 | 12 | 7 | 26 |
| 80 | 8 | 9 | 10 | 11 | 13 | 7 | 27 |
| 82 | 9 | 10 | 10 | 12 | 13 | 7 | 28 |
| 84 | 9 | 10 | 11 | 12 | 13 | 8 | 29 |
| 86 | 9 | 10 | 11 | 12 | 13 | 8 | 29 |
| 88 | 9 | 10 | 12 | 13 | 14 | 8 | 30 |
| 90 | 9 | 11 | 12 | 13 | 14 | 9 | 31 |
| 92 | 10 | 11 | 12 | 13 | 14 | 9 | 31 |

The above table does not apply to the ceilings of long hallways. To determine the correct number of double rolls required for the ceiling of a long hallway, multiply the length by the width in feet and divide by 60.

## Carpets

Ingrain Carpet is 36 inches or one yard wide. Brussels and Velvet Carpets are 27 inches or ¾-yard wide.

**How to Find the Number of Yards of Carpet to Cover a Floor:**

RULE: Divide the width of the room by the width of the carpet in feet. This will give the number of strips necessary. If there is a fraction over in the division add another strip. Then multiply the number of strips by the length of the room in feet and divide by 3; the result will equal the number of yards of carpeting to cover the floor. If there is any waste in matching figures, add this to the length of the room before multiplying by the number of strips.

For Brussels Carpet it is best to reduce the width of the room to inches and divide by 27, the width of Brussels in inches, for the number of strips. Then multiply the length of the room in feet by the number of strips and divide by 3 for the number of yards necessary to cover the floor.

It is sometimes more economical or desirable to run the strips crosswise. In that case divide the length of the room by the width of the carpet and multiply this, the number of strips, by the width of the room before dividing by 3.

EXAMPLE: A room is 12 feet 9 inches by 14 feet 6 inches. How many yards Ingrain Carpet are required to cover the floor?

SOLUTION: $12\frac{3}{4} \div 3 = 4\frac{1}{4}$ or 5 strips.
$14\frac{1}{2} \times 5 \div 3 = 24\ 1/6$ yards.

EXAMPLE: How many yards of Brussels Carpet will it take to cover a floor 15 feet 9 inches by 10 feet 2 inches in the most economical way when there is no waste in matching?

SOLUTION: 10 feet 2 inches equals 122 inches.
$122 \div 27 = 4\ 14/27$ or 5 strips.
$15\frac{3}{4} \times 5 \div 3 = 26\frac{1}{4}$ yards lengthwise.

CROSSWISE: 15 feet 9 inches = 189 inches.
$189 \div 27 = 7$ strips.
$10\ 1/6 \times 7 \div 3 = 23\ 15/18$ yards only.

## How to Write Your Name on Iron Tools

1. Melt a little beeswax or hard tallow and pour it on the iron at the place intended to be marked. After the wax or tallow cools take an awl or sharp piece of iron and write your name on it.
2. Pour a little nitric acid on the wax, where you have written your name, and allow it to remain a few moments. Then wipe off the wax, and your name remains indelibly marked as written in the wax.
3. Be careful and allow none of the acid to come in contact with your clothes or hands.

## How to Write Your Name on Glass

1. Apply beeswax and write your name as in the above.
2. Then instead of nitric acid, apply hydrofluoric acid and your name will remain permanently written on the clear surface of the glass.

## How to Make a Hole in Glass

Place a piece of stiff clay or putty on the part where you wish to make the hole. Make a hole in the putty reaching to the glass and just the size you want the hole in the glass. Pour a little molten lead into this hole and the piece of glass will drop out. This will not fail unless the glass is very thick.

## Common Names of Chemical Substances

| | |
|---|---|
| Blue Vitriol | Sulphate of Copper |
| Chalk | Carbonate of Calcium |
| Common Salt | Chloride of Sodium |
| Copperas | Sulphate of Iron |
| Water | Oxide of Hydrogen |
| Lime | Oxide of Calcium |
| Glucose | Grape Sugar |
| Soda | Bicarbonate of Sodium |
| Cream of Tartar | Bitartrate of Potassa |
| Epson Salts | Sulphate of Magnesia |
| Oil of Vitriol | Sulphuric Acid |
| Potash | Hydrate of Potassium |
| Vinegar | Acetic Acid (diluted) |
| Spirits of Hartshorn | Aqua Ammonia |

## Painting Rules

One coat, or priming will take, per 100 yards of painting, 40 pounds of lead, 2 gallons of oil, and 1 quart of spirits of turpentine. Two-coat work, 40 pounds of lead and 2 gallons of oil. Three-coat, the same quantity as two-coat; so that a fair estimate for 100 yards of three-coat work would be 120 pounds of ltad and 6 gallons of oil.

One gallon priming color will cover 50 superficial yards; white zinc, 50 yards; white paint, 44 yards; lead color, 50 yards; black paint, 50 yards; stone color, 4 yards; yellow paint, 44 yards; blue color, 45 yards; green paint, 45 yards; bright emerald green, 25 yards; bronze green, 75 yards.

One pound of paint will cover about 4 superficial yards the first coat, and about 6 each additional coat. One pound of putty, for stopping, every 20 yards. One gallon of tar and one pound of pitch will cover 12 yards, interchange the first coat, and 17 yards each additional coat. A square yard of new brick wall requires, for the first coat of paint in oil, ¾ pound; for the second, 3 pounds; for the third, 4 pounds.

A day's work on the outside of a building is 100 yards of the first coat, and 80 yards of either second or third coat. An ordinary door, including casings, will, on both sides, make 8 to 10 yards of painting, or about 5 yards to a door without the casings. An ordinary window makes about 2½ or 3 yards.

## How to Mix Paints of Various Colors

Buff—White, yellow ochre and red.
Chestnut—Red, black and yellow.
Chocoate—Raw umber, red and black.
Claret—Red, umber and black.
Copper—Red, yellow and black.
Dove—White, vermillion, blue and yellow.
Drab—White, yellow ochre, red and black.
Fawn—White, yellow and red.
Flesh—White, yellow ochre and vermillion.
Freestone—Red, black, yellow ochre and white.
French Grey—White, Prussian blue and lake.
Grey—White lead and black.
Gold—White, stone ochre and red.
Green Bronze—Chrome green, black and yellow.
Green Pea—White and chrome green.
Lemon—White and chrome yellow.
Limestone—White, yellow ochre, black and red.
Olive—Yellow, blue, black and white.
Orange—Yellow and red.
Peach—White and vermillion.
Pearl—White, black and blue.
Pink—White, vermillion and lake.
Purple—Violet, with more red and white.
Rose—White and madder lake.
Sandstone—White, yellow ochre, black and red.
Snuff—Yellow and Vandyke brown.
Violet—Red, blue and white.

The first named color is always the principal ingredient, and the others follow in the order of their importance. Thus in mixing a limestone tint, white is the principal ingredient, and the red the color of which the least is needed. The exact proportions of each color must be determined by experiment with a smaller quantity. It is best to have the principal ingredient thick, and add to it the other paints thinner.

## Wire Nails to the Pound

| | Number to the lb. | Length in inches |
|---|---|---|
| 3 penny fine | 778 | 1⅛ |
| 3 penny common | 568 | 1¼ |
| 4 penny common | 316 | 1½ |
| 6 penny common | 181 | 2 |
| 8 penny common | 106 | 2½ |
| 10 penny common | 69 | 3 |
| 16 penny common | 49 | 3½ |
| 20 penny common | 31 | 4 |
| 40 penny common | 18 | 5 |
| 60 penny common | 11 | 6 |
| 8 penny fence | 82 | 2½ |
| 10 penny fence | 50 | 3 |

## Table of Specific Gravity

**Compared with water**

| | | | |
|---|---|---|---|
| Water distilled | 100 | Iron, cast | 721 |
| Water, sea | 103 | Ivory | 183 |
| Alcohol | 84 | Lead | 1,135 |
| Aluminum | 256 | Mahogany | 106 |
| Ash | 84 | Maple | 75 |
| Beer | 102 | Marble | 270 |
| Brass | 840 | Milk, cow's | 103 |
| Butter | 94 | Milk, goat's | 104 |
| Cedar | 61 | Oak | 117 |
| Chalk | 279 | Opium | 134 |
| Cider | 102 | Platinum | 2,150 |
| Coal | 130 | Porcelain | 226 |
| Copper | 895 | Silver | 1,047 |
| Cork | 24 | Steel | 783 |
| Diamond | 353 | Sulphur | 203 |
| Ebony | 133 | Tin | 729 |
| Fir | 55 | Turpentine | 99 |
| Glass | 289 | Walnut | 67 |
| Gold | 1,926 | Wine | 100 |
| Ice | 92 | Zinc | 691 |

## A Cubic Foot Of

| | Pounds | | Pounds |
|---|---|---|---|
| Common soil weighs | 124 | Clay or stone weighs | 160 |
| Strong soil weighs | 127 | Cork weighs | 15 |
| Loose earth or sand weighs | 95 | Tallow weighs | 59 |
| Clay weighs | 135 | Brick weighs | 125 |
| Lead weighs | 708¾ | Marble weighs | 171 |
| Copper weighs | 555 | Granite weighs | 165 |
| Wrought Iron weighs | 486¾ | Oak wood weighs | 55 |
| Anthracite coal weighs | 50-55 | Red pine weighs | 42 |
| Bituminous coal weighs | 45-55 | White pine weighs | 30 |

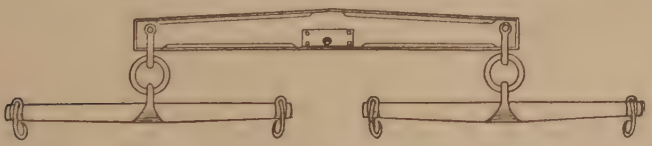
## EFFICIENCY ON THE FARM

**1. The Business of Farming.**—A successful farmer must know many things and be able to perform numerous duties outside of the things he knows and does in connection with the tilling of the soil and the raising of live-stock. He must be something of a mechanic, a carpenter, a painter, mason, and general jack of all trades. He is the executive, advertising, sales, purchasing and accounting departments of a big business, all in one. This being the case every page of the BUSINESS GUIDE contains something of value to him, and even though this particular chapter is intended expressly for him, it nevertheless includes information and tables which will be found valuable in any other line of business.

**2. Estimates.**—Every farmer has his own method of figuring. He can tell at a glance the weight of an animal. He figures this bin will hold so many bushels of grain, and that corn crib so much corn. Usually his estimates are

near enough to the truth for all practical purposes, but there are times when it is dangerous and costly to guess. At sales, and on other special occasions when any inaccuracy may mean a loss in dollars and cents the farmer needs a reliable source of information. All the following short methods of figuring, the rules for estimating, and the ready reference tables have been assembled in one chapter to meet this very real need. They are accurate, time tested, and absolutely reliable.

### How Much Advantage is Given in Changing the Evener



**Caution.—In moving the center pin of an evener one inch toward one of the end pins it changes the draft twice as much as it does to move one of the end pins one inch toward the center pin. Or in other words, moving the center pin changes the draft twice as much as changing one of the end pins or clevises.**

An average evener is 42 inches in length.

Now if the center pin is moved one inch from the center to the right or left, the horse drawing on the short end will pull about 2/40 more than the horse drawing on the opposite end.

If one of the end pins is moved one inch the difference will be about 1/40.

EXAMPLE:—If a team of horses draws 2000 pounds, and the center pin is moved one inch from the center, what part of the whole load will each draw?

2000×2/40=100 pounds, the difference.

50+1000=1050 pounds. 1000—50=950 pounds.

Hence the horse at the short end of the evener draws 1050 lbs., and the other horse draws 950 lbs.

The draft on a 14-inch plow, plowing 4 inches deep, is about 1000 lbs.; 5 inches deep, 1250 lbs.; 6 inches deep, 1500 lbs.

## How to Find the Distance Traveled in Plowing

Showing the distance traveled by a horse in plowing an acre of land, and the quantity of land cultivated per day, computed at the rate of 16 and 18 miles per day of 9 hours:

| Breadth of furrow slice in inches | Miles traveled in plowing an acre | Acres plowed per day. | | Breadth of furrow slice in inches | Miles traveled in plowing an acre | Acres plowed per day. | |
|---|---|---|---|---|---|---|---|
| | | 18 Mi. | 16 Mi. | | | 18 Mi. | 16 Mi. |
| 7 | 14⅛ | 1¼ | 1⅜ | 14 | 7 | 2½ | 2¼ |
| 8 | 12½ | 1½ | 1½ | 15 | 6⅔ | 2⅔ | 2½ |
| 9 | 11 | 1⅝ | 1¾ | 16 | 6¼ | 2 3/16 | 2⅞ |
| 10 | 9 9/16 | 1⅞ | 1⅞ | 17 | 5⅞ | 3 | 2¾ |
| 11 | 9 | 2 | 1⅞ | 18 | 5½ | 3⅛ | 2 3/16 |
| 12 | 8⅓ | 2⅛ | 1 3/16 | 19 | 5¼ | 3⅜ | 3 1/16 |
| 13 | 7⅛ | 2⅜ | 2⅜ | 20 | 4 9/16 | 3⅜ | 3⅛ |

## How to Measure Hay, Straw and Grain

*A ton of dry hay is variously estimated from 400 to 500 cubic feet to the ton.

To be on the safe side it is best to estimate about 500 cubic feet to the ton.

### Hay in a Mow

RULE:—Multiply the length in feet by the height in feet and this by the breadth in feet; and divide the result by 500 and you have the number of tons.

EXAMPLE:—How many tons of hay in a mow 20 feet long, 10 feet high, and 15 feet wide?

SOLUTION:—20×10×15÷500=6. Ans.

### How to Estimate the Number of Tons in a Stack

RULE:—Multiply the length in feet by the width in feet, and this by one-half the height, and divide the product by 300.

EXAMPLE:—How many tons of hay in a stack 20 feet long, 12 feet high, and 15 feet wide?

SOLUTION:—20×6×15÷300=6 tons. Ans.

### How to Estimate the Contents of a Round Stack

RULE:—Multiply the square of the distance around the stack in yards by 4 times the height in yards, and point off two places from the right, and this will be the number of cubic yards in the stack, which divided by 20 will equal the number of tons.

EXAMPLE:—How many tons of hay in a stack, distance around the bulge, 25 yards, and height, 9 yards?

SOLUTION:—25 × 25=625, then 625×36=22,500, pointing off two places makes 225, then 225÷20=11¼ tons. Ans.

---

*Some authorities allow only 350 cubic feet for a ton of timothy hay when thoroughly settled. Others allow 343 to 420. For millet allow only 216 cubic feet to the ton. The fact is, hay in stack or mow can only be approximately ascertained by measurement.

### How to Find the Number of Bushels in a Bin or Box

RULE:—Multiply together the length, breadth and depth in feet and this product again by 8 and cut off the right hand figure. The result will be the number of bushels.

For more exact results multiply by 80357 and cut off the five right hand figures or, multiply together the length, breadth and depth in inches and divide the result by 2150.4 the number of cubic inches in a bushel.

EXAMPLE:—How many bushels in a bin 12 feet long, 10 feet wide and 6 feet deep?

SOLUTION:—12×10×6×8=576 bushels or
12×10×6×80357=578 bushels.

12×12=144 length in inches.
10×12=120 width in inches.
6×12= 72 depth in inches.
144×120×72=1244160 Sq. inches.
1244160÷2150.4=578.57 bushels.

### How to Find the Contents of a Wagon Box

A common wagon box 10 feet long and 3 feet wide will hold 2 bushels for every inch in depth.

RULE: Multiply the depth of the wagon box in inches by 2 and the result will be the number of bushels.

If the wagon box is 11 feet long add one-tenth of the number of bushels to itself.

EXAMPLE:—How many bushels of grain will a wagon box hold 10 feet long, 3 feet wide and 22 inches deep?

SOLUTION:—22×2=44 bushel.

11 ft. long: 44÷10=4.4.

44+4.4=48.4 bushel.

### Shrinkage of Grain

In deciding to keep their grain farmers should take into account the shrinkage. Wheat will shrink two quarts to the bushel in six months from the time it is threshed. Corn shrinks much more, the shrinkage being nearly one-fifth of the whole amount. So that for corn forty cents from the field is as much as fifty cents in March. In the case of potatoes, the loss from October to May is about thirty-three per cent.

### Bushels

The dimensions of the bushel are 18½ inches inner diameter; 19½ inches outer diameter, and 8 inches deep: and when heaped the cone is not to be less than 6 inches high, which makes a heaped bushel equal to 1¼ struck ones.

## How to Estimate the Contents of Silos

| These columns show capacity in tons after settling | | | | DEPTH OF SILAGE IN FEET | These columns show capacity in tons before settling | | | |
|---|---|---|---|---|---|---|---|---|
| DIAMETER IN FEET | | | | | DIAMETER IN FEET | | | |
| 10 | 12 | 14 | 16 | | 10 | 12 | 14 | 16 |
| 29 | 42 | 56 | 75 | 20 | 23 | 33 | 45 | 58 |
| 31 | 45 | 61 | 79 | 21 | 24 | 35 | 48 | 63 |
| 33 | 47 | 64 | 84 | 22 | 26 | 38 | 51 | 67 |
| 34 | 49 | 67 | 88 | 23 | 28 | 40 | 54 | 72 |
| 36 | 52 | 70 | 92 | 24 | 30 | 43 | 58 | 76 |
| 38 | 54 | 74 | 96 | 25 | 31 | 45 | 61 | 80 |
| 39 | 56 | 77 | 100 | 26 | 33 | 48 | 65 | 85 |
| 41 | 59 | 80 | 105 | 27 | 35 | 50 | 68 | 89 |
| 43 | 61 | 83 | 109 | 28 | 37 | 53 | 72 | 94 |
| 44 | 64 | 87 | 113 | 29 | 39 | 56 | 76 | 99 |
| 46 | 66 | 90 | 118 | 30 | 41 | 59 | 80 | 104 |
| 48 | 69 | 93 | 122 | 31 | 43 | 61 | 83 | 109 |
| 49 | 71 | 97 | 126 | 32 | 45 | 64 | 87 | 114 |
| 51 | 74 | 100 | 131 | 33 | 47 | 67 | 91 | 119 |
| 53 | 76 | 103 | 135 | 34 | 49 | 70 | 95 | 124 |
| 54 | 78 | 107 | 139 | 35 | 51 | 73 | 99 | 129 |
| 56 | 81 | 110 | 143 | 36 | 53 | 76 | 103 | 135 |
| 58 | 83 | 113 | 148 | 37 | 55 | 79 | 107 | 140 |
| 59 | 86 | 117 | 152 | 38 | 57 | 82 | 111 | 145 |
| 61 | 88 | 120 | 156 | 39 | 59 | 85 | 116 | 151 |
| 63 | 90 | 123 | 161 | 40 | 61 | 88 | 120 | 156 |
| 65 | 93 | 127 | 165 | 41 | 63 | 91 | 124 | 162 |
| 66 | 95 | 130 | 169 | 42 | 65 | 94 | 128 | 167 |
| 68 | 98 | 133 | 174 | 43 | 67 | 97 | 131 | 172 |
| 70 | 100 | 136 | 178 | 44 | 69 | 100 | 134 | 176 |
| 71 | 102 | 140 | 182 | 45 | 70 | 103 | 137 | 179 |

All methods of estimating the contents of silos are approximate. The variety of corn, how rank the growth, how mature when put up, whether light or heavy eared, how short it was cut up, how fast the silo was filled, how well it was tramped, how much water was added, and many other factors affect the weight of the ensilage. They should be borne in mind when using the accompanying table.

Rule: For a more accurate estimate find the true diameter in feet. Multiply the square of the diameter by 0.7854 to give the square feet of area, and this multiplied by the depth in feet will give the capacity in cubic feet.

Now multiply each cubic foot by 33.4 lbs. for the first five feet of depth, 36.7 lbs. for the second five, 39.2 lbs. for the third five, 40.8 lbs. for the fourth five, 41.6 lbs. for the fifth five, 42.6 lbs. for the sixth five, and 43 lbs. for all below the thirty foot depth. This gives you the weight in pounds. The weights for each five feet may be averaged and the whole silo estimated in one operation.

Example: How many tons of silage in a silo 12 feet in diameter and 36 feet high, when it is three-quarters full?

Solution: $12\times12=144\times0.7854=113.09\times27=3053.43$ cu. ft.

Average weight for each 5 feet$=38.3\times3053.43=116946.36$ lbs. or 58.47 tons. Ans.

## How to Measure Ear Corn in the Crib.

Measuring corn in the crib is at best an estimate. Much depends upon the condition of the corn. A bushel of corn means either a bushel of shelled corn or ear corn enough to make a bushel of shelled corn.

RULE:—Multiply the length in feet by the height in feet and that again by the width in feet, multiply the result by 4 and cut off the right hand figure and you have the contents in bushels of shelled corn.

EXAMPLE:—How many bushels of shelled corn in a crib of corn in the ear, 20 feet long, 10 feet high and 8 feet wide?

SOLUTION:—$20\times10\times8\times4=640.0$ bushels. Ans.

This is the result when 2½ cubic feet or 4320 cubic inches are taken for a bushel.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Counting | 4200 | cubic | inches | in | a | bushel | multiply | by..... 411 |
| " | 4100 | " | " | " | " | " | " | ..... 421 |
| " | 4000 | " | " | " | " | " | " | ..... 432 |
| " | 3900 | " | " | " | " | " | " | ..... 443 |
| " | 3800 | " | " | " | " | " | " | ..... 455 |

In each of these cases cut off the three right hand figures after multiplying. The result will be the number of bushels. There is often a disagreement in measuring ear corn in the crib. As will be seen from the above, the differences result from taking a different number of cubic inches to the bushel.

Here is another very simple rule:

Multiply the cubic feet by 4 and divide the product by 9.

EXAMPLE:—A crib of corn is 15 feet long, 8 feet wide and 9 feet high. How many bushels of corn does it contain?

SOLUTION:—15×8×9=1080×4=4320÷9=480 bushels.

This allows 2¼ cubic feet, or about 3900 cubic inches for a bushel.

This rule is not only very simple but is very frequently used. It will hold out in good dry corn.

When the crib is flared at the side multiply half the sum of the top and bottom widths in feet by the perpendicular height in feet, and then again by the length in feet. This gives the number of cubic feet. Then proceed as above.

## How to Estimate the Contents of a Pile of Grain, Potatoes, Etc.

RULE:—Put the commodity in the form of a heap. Then multiply the diameter in feet by itself, and then again by the height in feet, and divide the result by 4, and you have the approximate contents in bushels.

EXAMPLE:—How many bushels in a heap of grain 6 feet in diameter and 3 feet high?

SOLUTION:—6×6×3÷4=27 bushels. Ans.

## How to Figure Up a Load of Grain.

RULE:—Find the total number of pounds and divide that by the number of pounds in one bushel and it will equal the number of bushels.

EXAMPLE:—How many bushels in 2840 pounds of wheat, and what will it cost at 90 cents per bushel?

SOLUTION:—2840÷60=47 bushels and 20 pounds or 47 1/3 bushels.
47 1/3×90c.=$42.60. Ans.

## How to Use the Grain Table.

The heavy type column represents the weight of the load, and the number of bushels and pounds are at the right under the kind of grain.

EXAMPLE:—How many bushels of oats in 2490 pounds?

ANSWER:—77 bushels and 26 pounds.

## How to Find the Number of Bushels in a Load of Grain at Sight.

| Wt. | Oats 32 lbs. | | Corn, rye 56 lbs. | | Barley 48 lbs. | | Wheat 60 lbs. | | Wt. | Oats 32 lbs. | | Corn, rye 56 lbs. | | Barley 48 lbs. | | Wheat 60 lbs. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Bus | Lbs | Bus | Lbs | Bus | Lbs | Bus | Lbs | | Bus | Lbs | Bus | Lbs | Bus | Lbs | Bus | Lbs |
| 1500 | 46 | 28 | 26 | 44 | 31 | 12 | 25 | 00 | 2010 | 62 | 26 | 35 | 50 | 41 | 42 | 33 | 30 |
| 1510 | 47 | 06 | 26 | 54 | 31 | 22 | 25 | 10 | 2020 | 63 | 04 | 36 | 04 | 42 | 04 | 33 | 40 |
| 1520 | 47 | 16 | 27 | 08 | 31 | 32 | 25 | 20 | 2030 | 63 | 14 | 36 | 14 | 42 | 14 | 33 | 50 |
| 1530 | 47 | 26 | 27 | 18 | 31 | 42 | 25 | 30 | 2040 | 63 | 24 | 36 | 24 | 42 | 24 | 34 | 00 |
| 1540 | 48 | 04 | 27 | 28 | 32 | 04 | 25 | 40 | 2050 | 64 | 02 | 36 | 34 | 42 | 34 | 34 | 10 |
| 1550 | 48 | 14 | 27 | 38 | 32 | 14 | 25 | 50 | 2060 | 64 | 12 | 36 | 44 | 42 | 44 | 34 | 20 |
| 1560 | 48 | 24 | 27 | 48 | 32 | 24 | 26 | 00 | 2070 | 64 | 22 | 36 | 54 | 43 | 06 | 34 | 30 |
| 1570 | 49 | 02 | 28 | 02 | 32 | 34 | 26 | 10 | 2080 | 65 | 00 | 37 | 08 | 43 | 16 | 34 | 40 |
| 1080 | 49 | 12 | 28 | 12 | 32 | 44 | 26 | 20 | 2090 | 65 | 10 | 37 | 18 | 43 | 26 | 34 | 50 |
| 1590 | 49 | 22 | 28 | 22 | 33 | 06 | 26 | 30 | 2100 | 65 | 20 | 37 | 28 | 43 | 36 | 35 | 00 |
| 1600 | 50 | 00 | 28 | 32 | 33 | 16 | 26 | 40 | 2110 | 65 | 30 | 37 | 38 | 43 | 46 | 35 | 10 |
| 1610 | 50 | 10 | 28 | 42 | 33 | 26 | 26 | 50 | 2120 | 66 | 08 | 37 | 48 | 44 | 08 | 35 | 20 |
| 1620 | 50 | 20 | 28 | 52 | 33 | 36 | 27 | 00 | 2130 | 66 | 18 | 38 | 02 | 44 | 18 | 35 | 30 |
| 1230 | 50 | 30 | 29 | 06 | 33 | 46 | 27 | 10 | 2140 | 66 | 28 | 38 | 12 | 44 | 28 | 35 | 40 |
| 1640 | 51 | 08 | 29 | 16 | 34 | 08 | 27 | 20 | 2150 | 67 | 06 | 38 | 22 | 44 | 38 | 35 | 50 |
| 1650 | 51 | 18 | 29 | 26 | 34 | 18 | 27 | 30 | 2160 | 67 | 16 | 38 | 32 | 45 | 00 | 36 | 00 |
| 1660 | 51 | 28 | 29 | 36 | 34 | 28 | 27 | 40 | 2170 | 67 | 26 | 38 | 42 | 45 | 10 | 36 | 10 |
| 1670 | 52 | 06 | 29 | 46 | 34 | 38 | 27 | 50 | 2180 | 68 | 04 | 38 | 52 | 45 | 20 | 36 | 20 |
| 1680 | 52 | 16 | 30 | 00 | 35 | 00 | 28 | 00 | 2190 | 68 | 14 | 39 | 06 | 45 | 30 | 36 | 30 |
| 1690 | 52 | 26 | 30 | 10 | 35 | 10 | 28 | 10 | 2200 | 68 | 24 | 39 | 16 | 45 | 40 | 36 | 40 |
| 1700 | 53 | 04 | 30 | 20 | 35 | 20 | 28 | 20 | 2210 | 69 | 02 | 39 | 26 | 46 | 02 | 36 | 50 |
| 1710 | 53 | 14 | 30 | 30 | 35 | 30 | 28 | 30 | 2220 | 69 | 12 | 39 | 36 | 46 | 12 | 37 | 00 |
| 1720 | 53 | 24 | 30 | 40 | 35 | 40 | 28 | 40 | 2230 | 69 | 22 | 39 | 46 | 46 | 22 | 37 | 10 |
| 1730 | 54 | 02 | 30 | 50 | 36 | 02 | 28 | 50 | 2240 | 70 | 00 | 40 | 00 | 46 | 32 | 37 | 20 |
| 1740 | 54 | 12 | 31 | 04 | 36 | 12 | 29 | 00 | 2250 | 70 | 10 | 40 | 10 | 46 | 42 | 37 | 30 |
| 1750 | 54 | 22 | 31 | 14 | 36 | 22 | 29 | 10 | 2260 | 70 | 20 | 40 | 20 | 47 | 04 | 37 | 40 |
| 1760 | 55 | 00 | 31 | 24 | 36 | 32 | 29 | 20 | 2270 | 70 | 30 | 40 | 30 | 47 | 14 | 37 | 50 |
| 1770 | 55 | 10 | 31 | 34 | 36 | 42 | 29 | 30 | 2280 | 71 | 08 | 40 | 40 | 47 | 24 | 38 | 00 |
| 1780 | 55 | 20 | 31 | 44 | 37 | 04 | 29 | 40 | 2290 | 71 | 18 | 40 | 50 | 47 | 34 | 38 | 10 |
| 1790 | 55 | 30 | 31 | 54 | 37 | 14 | 29 | 50 | 2300 | 71 | 28 | 41 | 04 | 47 | 44 | 38 | 20 |
| 1800 | 56 | 08 | 32 | 08 | 37 | 24 | 30 | 00 | 2310 | 72 | 06 | 41 | 14 | 48 | 06 | 38 | 30 |
| 1810 | 56 | 18 | 32 | 18 | 37 | 34 | 30 | 10 | 2320 | 72 | 16 | 41 | 24 | 48 | 16 | 38 | 40 |
| 1820 | 56 | 28 | 32 | 28 | 37 | 44 | 30 | 20 | 2330 | 72 | 26 | 41 | 34 | 48 | 26 | 38 | 50 |
| 1830 | 57 | 06 | 32 | 38 | 38 | 06 | 30 | 30 | 2340 | 73 | 04 | 41 | 44 | 48 | 36 | 39 | 00 |
| 1840 | 57 | 16 | 32 | 48 | 38 | 16 | 30 | 40 | 2350 | 73 | 14 | 41 | 54 | 48 | 46 | 39 | 10 |
| 1850 | 57 | 26 | 33 | 02 | 38 | 26 | 30 | 50 | 2360 | 73 | 24 | 42 | 08 | 49 | 08 | 39 | 20 |
| 1860 | 58 | 04 | 33 | 12 | 38 | 36 | 31 | 00 | 2370 | 74 | 02 | 42 | 18 | 49 | 18 | 39 | 30 |
| 1870 | 58 | 14 | 33 | 22 | 38 | 46 | 31 | 10 | 2380 | 74 | 12 | 42 | 28 | 49 | 28 | 39 | 40 |
| 1880 | 58 | 24 | 33 | 32 | 39 | 08 | 31 | 20 | 2390 | 74 | 22 | 42 | 38 | 49 | 38 | 39 | 50 |
| 1890 | 59 | 02 | 33 | 42 | 39 | 18 | 31 | 30 | 2400 | 75 | 00 | 42 | 48 | 50 | 00 | 40 | 00 |
| 1900 | 59 | 12 | 33 | 52 | 39 | 28 | 31 | 40 | 2410 | 75 | 10 | 43 | 02 | 50 | 10 | 40 | 10 |
| 1910 | 59 | 22 | 34 | 06 | 39 | 38 | 31 | 50 | 2420 | 75 | 20 | 43 | 12 | 50 | 20 | 40 | 20 |
| 1920 | 60 | 00 | 34 | 16 | 40 | 00 | 32 | 00 | 2430 | 75 | 30 | 43 | 22 | 50 | 30 | 40 | 30 |
| 1930 | 60 | 10 | 34 | 26 | 40 | 10 | 32 | 10 | 2440 | 76 | 08 | 43 | 32 | 50 | 40 | 40 | 40 |
| 1940 | 60 | 20 | 34 | 36 | 40 | 20 | 32 | 20 | 2450 | 76 | 18 | 43 | 42 | 51 | 02 | 40 | 50 |
| 1950 | 60 | 30 | 34 | 46 | 40 | 30 | 32 | 30 | 2460 | 76 | 28 | 43 | 52 | 51 | 12 | 41 | 00 |
| 1960 | 61 | 08 | 35 | 00 | 40 | 40 | 32 | 40 | 2470 | 77 | 06 | 44 | 06 | 51 | 22 | 41 | 10 |
| 1970 | 61 | 18 | 35 | 10 | 41 | 02 | 32 | 50 | 2480 | 77 | 16 | 44 | 16 | 51 | 32 | 41 | 20 |
| 1980 | 61 | 28 | 35 | 20 | 41 | 12 | 33 | 00 | 2490 | 77 | 26 | 44 | 26 | 51 | 42 | 41 | 30 |
| 1990 | 62 | 06 | 35 | 30 | 41 | 22 | 33 | 10 | 2500 | 78 | 04 | 44 | 36 | 52 | 04 | 41 | 40 |
| 2000 | 62 | 16 | 35 | 40 | 41 | 32 | 33 | 20 | 2510 | 78 | 14 | 44 | 46 | 52 | 14 | 41 | 50 |

## How to Find the Number of Bushels in a Load of Grain at Sight.

| Wt. | Oats 32 lbs. | | Corn, rye 56 lbs. | | Barley 48 lbs. | | Wheat 60 lbs. | | Wt. | Oats 32 lbs. | | Corn, rye 56 lbs. | | Barley 48 lbs. | | Wheat 60 lbs. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Bus | Lbs | Bus | Lbs | Bus | Lbs | Bus | Lbs | | Bus | Lbs | Bus | Lbs | Bus | Lbs | Bus | Lbs |
| 2520 | 78 | 24 | 45 | 00 | 52 | 24 | 42 | 00 | 3020 | 94 | 12 | 53 | 52 | 62 | 44 | 50 | 20 |
| 2530 | 79 | 02 | 45 | 10 | 52 | 34 | 42 | 10 | 3030 | 94 | 22 | 54 | 06 | 63 | 06 | 50 | 30 |
| 2540 | 79 | 12 | 45 | 20 | 52 | 44 | 42 | 20 | 3040 | 95 | 00 | 54 | 16 | 63 | 16 | 50 | 40 |
| 2550 | 79 | 22 | 45 | 30 | 53 | 06 | 42 | 30 | 3050 | 95 | 10 | 54 | 26 | 63 | 26 | 50 | 50 |
| 2560 | 80 | 00 | 45 | 40 | 53 | 16 | 42 | 40 | 3060 | 95 | 20 | 54 | 36 | 63 | 36 | 51 | 00 |
| 2570 | 80 | 10 | 45 | 50 | 53 | 26 | 42 | 50 | 3070 | 95 | 30 | 54 | 46 | 63 | 46 | 51 | 10 |
| 2580 | 80 | 20 | 46 | 04 | 53 | 36 | 43 | 00 | 3080 | 96 | 08 | 55 | 00 | 64 | 08 | 51 | 20 |
| 2590 | 80 | 30 | 46 | 14 | 53 | 46 | 43 | 10 | 3090 | 96 | 18 | 55 | 10 | 64 | 18 | 51 | 30 |
| 2600 | 81 | 08 | 46 | 24 | 54 | 08 | 43 | 20 | 3100 | 96 | 28 | 55 | 20 | 64 | 28 | 51 | 40 |
| 2610 | 81 | 18 | 46 | 34 | 54 | 18 | 43 | 30 | 3110 | 97 | 06 | 55 | 30 | 64 | 38 | 51 | 50 |
| 2620 | 81 | 28 | 46 | 44 | 54 | 28 | 43 | 40 | 3120 | 97 | 16 | 55 | 40 | 65 | 00 | 52 | 00 |
| 2630 | 82 | 06 | 46 | 54 | 54 | 38 | 43 | 50 | 3130 | 97 | 26 | 55 | 50 | 65 | 10 | 52 | 10 |
| 2640 | 82 | 16 | 47 | 08 | 55 | 00 | 44 | 00 | 3140 | 98 | 04 | 56 | 04 | 65 | 20 | 52 | 20 |
| 2650 | 82 | 26 | 47 | 18 | 55 | 10 | 44 | 10 | 3150 | 98 | 14 | 56 | 14 | 65 | 30 | 52 | 30 |
| 2660 | 83 | 04 | 47 | 28 | 55 | 20 | 44 | 20 | 3160 | 98 | 24 | 56 | 24 | 65 | 40 | 52 | 40 |
| 2670 | 83 | 14 | 47 | 38 | 55 | 30 | 44 | 30 | 3170 | 99 | 02 | 56 | 34 | 66 | 02 | 52 | 50 |
| 2680 | 83 | 24 | 47 | 48 | 55 | 40 | 44 | 40 | 3180 | 99 | 12 | 56 | 44 | 66 | 12 | 53 | 00 |
| 2690 | 84 | 02 | 48 | 02 | 56 | 02 | 44 | 50 | 3190 | 99 | 22 | 56 | 54 | 66 | 22 | 53 | 10 |
| 2700 | 84 | 12 | 48 | 12 | 56 | 12 | 45 | 00 | 3200 | 100 | 00 | 57 | 08 | 66 | 32 | 53 | 20 |
| 2710 | 84 | 22 | 48 | 22 | 56 | 22 | 45 | 10 | 3210 | 100 | 10 | 57 | 18 | 66 | 42 | 53 | 30 |
| 2720 | 85 | 00 | 48 | 32 | 56 | 32 | 45 | 20 | 3220 | 100 | 20 | 57 | 28 | 67 | 04 | 53 | 40 |
| 2730 | 85 | 10 | 48 | 42 | 56 | 42 | 45 | 30 | 3230 | 100 | 30 | 57 | 38 | 67 | 14 | 53 | 50 |
| 2740 | 85 | 20 | 48 | 52 | 57 | 04 | 45 | 40 | 3240 | 101 | 08 | 57 | 48 | 67 | 24 | 54 | 00 |
| 2750 | 85 | 30 | 49 | 06 | 57 | 14 | 45 | 50 | 3250 | 101 | 18 | 58 | 02 | 67 | 34 | 54 | 10 |
| 2760 | 86 | 08 | 49 | 16 | 57 | 24 | 46 | 00 | 3260 | 101 | 28 | 58 | 12 | 67 | 44 | 54 | 20 |
| 2770 | 86 | 18 | 49 | 26 | 57 | 34 | 46 | 10 | 3270 | 102 | 06 | 58 | 22 | 68 | 06 | 54 | 30 |
| 2780 | 86 | 28 | 49 | 36 | 57 | 44 | 46 | 20 | 3280 | 102 | 16 | 58 | 32 | 68 | 16 | 54 | 40 |
| 2790 | 87 | 06 | 49 | 46 | 58 | 06 | 46 | 30 | 3290 | 102 | 26 | 58 | 42 | 68 | 26 | 54 | 50 |
| 2800 | 87 | 16 | 50 | 00 | 58 | 16 | 46 | 40 | 3300 | 103 | 04 | 58 | 52 | 68 | 36 | 55 | 00 |
| 2810 | 87 | 26 | 50 | 10 | 58 | 26 | 46 | 50 | 3310 | 103 | 14 | 59 | 06 | 68 | 46 | 55 | 10 |
| 2820 | 88 | 04 | 50 | 20 | 58 | 36 | 47 | 00 | 3320 | 103 | 24 | 59 | 16 | 69 | 08 | 55 | 20 |
| 2830 | 88 | 14 | 50 | 30 | 58 | 46 | 47 | 10 | 3330 | 104 | 02 | 59 | 26 | 69 | 18 | 55 | 30 |
| 2840 | 88 | 24 | 50 | 40 | 59 | 08 | 47 | 20 | 3340 | 104 | 12 | 59 | 36 | 69 | 28 | 55 | 40 |
| 2850 | 89 | 02 | 50 | 50 | 59 | 18 | 47 | 30 | 3350 | 104 | 22 | 59 | 46 | 69 | 38 | 55 | 50 |
| 2860 | 89 | 12 | 51 | 04 | 59 | 28 | 47 | 40 | 3360 | 105 | 00 | 60 | 00 | 70 | 00 | 56 | 00 |
| 2870 | 89 | 22 | 51 | 14 | 59 | 38 | 47 | 50 | 3370 | 105 | 10 | 60 | 10 | 70 | 10 | 56 | 10 |
| 2880 | 90 | 00 | 51 | 24 | 60 | 00 | 48 | 00 | 3380 | 105 | 20 | 60 | 20 | 70 | 20 | 56 | 20 |
| 2890 | 90 | 10 | 51 | 34 | 60 | 10 | 48 | 10 | 3390 | 105 | 30 | 60 | 30 | 70 | 30 | 56 | 30 |
| 2900 | 90 | 20 | 51 | 44 | 60 | 20 | 48 | 20 | 3400 | 106 | 08 | 60 | 40 | 70 | 40 | 56 | 40 |
| 2910 | 90 | 30 | 51 | 54 | 60 | 30 | 48 | 30 | 3410 | 106 | 18 | 60 | 50 | 71 | 02 | 56 | 50 |
| 2920 | 91 | 08 | 52 | 08 | 60 | 40 | 48 | 40 | 3420 | 106 | 28 | 61 | 04 | 71 | 12 | 57 | 00 |
| 2930 | 91 | 18 | 52 | 18 | 61 | 02 | 48 | 50 | 3430 | 107 | 06 | 61 | 14 | 71 | 22 | 57 | 10 |
| 2940 | 91 | 28 | 52 | 28 | 61 | 12 | 49 | 00 | 3440 | 107 | 16 | 61 | 24 | 71 | 32 | 57 | 20 |
| 2950 | 92 | 06 | 52 | 38 | 61 | 22 | 49 | 10 | 3450 | 107 | 26 | 61 | 34 | 71 | 42 | 57 | 30 |
| 2960 | 92 | 16 | 52 | 48 | 61 | 32 | 49 | 20 | 3460 | 108 | 04 | 61 | 44 | 72 | 04 | 57 | 40 |
| 2970 | 92 | 26 | 53 | 02 | 61 | 42 | 49 | 30 | 3470 | 108 | 14 | 61 | 54 | 72 | 14 | 57 | 50 |
| 2980 | 93 | 04 | 53 | 12 | 62 | 04 | 49 | 40 | 3480 | 108 | 24 | 62 | 08 | 72 | 24 | 58 | 00 |
| 2990 | 93 | 14 | 53 | 22 | 62 | 14 | 49 | 50 | 3490 | 109 | 02 | 62 | 18 | 72 | 34 | 58 | 10 |
| 3000 | 93 | 24 | 53 | 32 | 62 | 24 | 50 | 00 | 3500 | 109 | 12 | 62 | 28 | 72 | 44 | 58 | 20 |
| 3010 | 94 | 02 | 53 | 42 | 62 | 34 | 50 | 10 | 3510 | 109 | 22 | 62 | 38 | 73 | 06 | 58 | 30 |

## Table of Wages By the Week, Given By the Day and Hour.

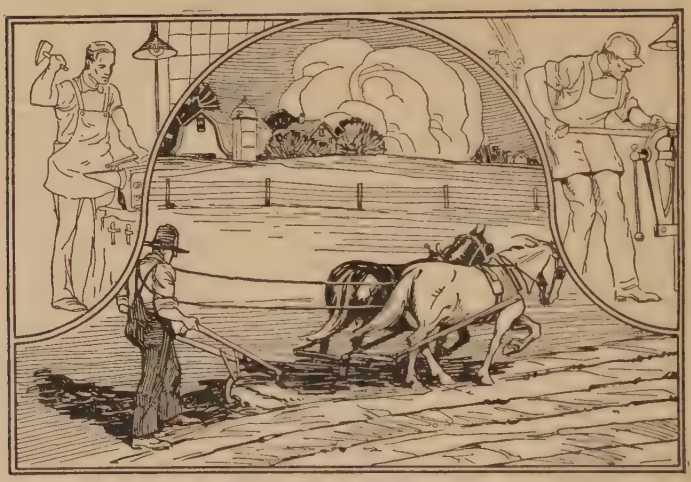
| Time | $1 | $2 | $3 | $4 | $5 | $6 | $7 | $8 | $9 | $10 | $11 | $12 | $13 | $14 | $15 | $16 | $17 | $18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ½ Hr. | | .01⅔ | .02½ | .03⅓ | .04⅙ | .05 | .05⅚ | .06⅔ | .07½ | .08⅓ | .09⅙ | .10 | .10⅚ | .11⅔ | .12½ | .13⅓ | .14⅙ | .15 |
| 1 | .01⅔ | .03⅓ | .05 | .06⅔ | .08⅓ | .10 | .11⅔ | .13⅓ | .15 | .16⅔ | .18⅓ | .20 | .21⅔ | .23⅓ | .25 | .26⅔ | .28⅓ | .30 |
| 2 | .03⅓ | .06⅔ | .10 | .13⅓ | .16⅔ | .20 | .23⅓ | .26⅔ | .30 | .33⅓ | .36⅔ | .40 | .43⅓ | .46⅔ | .50 | .53⅓ | .56⅔ | .60 |
| 3 | .05 | .10 | .15 | .20 | .25 | .30 | .35 | .40 | .45 | .50 | .55 | .60 | .65 | .70 | .75 | .80 | .85 | .90 |
| 4 | .06⅔ | .13⅓ | .20 | .26⅔ | .33⅓ | .40 | .46⅔ | .53⅓ | .60 | .66⅔ | .73⅓ | .80 | .86⅔ | .93⅓ | 1.00 | 1 06⅔ | 1.13⅓ | 1.20 |
| 5 | .08⅓ | .16⅔ | .25 | .33⅓ | .41⅔ | .50 | .58⅓ | .66⅔ | .75 | .83⅓ | .91⅔ | 1 00 | 1.08⅓ | 1 16⅔ | 1 25 | 1.33⅓ | 1 41⅔ | 1.50 |
| 6 | .10 | .20 | .30 | .40 | .50 | .60 | .70 | .80 | .90 | 1 00 | 1.10 | 1.20 | 1.30 | 1 40 | 1 50 | 1.60 | 1 70 | 1.80 |
| 7 | .11⅔ | .23⅓ | .35 | .46⅔ | .58⅓ | .70 | .81⅔ | .93⅓ | 1.05 | 1.16⅔ | 1.28⅓ | 1.40 | 1.51⅔ | 1 63⅓ | 1.75 | 1.86⅔ | 1.98⅓ | 2.10 |
| 8 | .13⅓ | .26⅔ | .40 | .53⅓ | .66⅔ | .80 | .93⅓ | 1.06⅔ | 1 20 | 1.33⅓ | 1.46⅔ | 1 60 | 1.73⅓ | 1 86⅔ | 2 00 | 2.13⅓ | 2.26⅔ | 2 40 |
| 9 | .15 | .30 | .45 | .60 | .75 | .90 | 1.05 | 1.20 | 1.35 | 1.50 | 1.65 | 1 80 | 1.95 | 2 10 | 2.25 | 2 40 | 2 55 | 2.70 |
| 1 Day | .16⅔ | .33⅓ | .50 | .66⅔ | .83⅓ | 1.00 | 1.16⅔ | 1 33⅓ | 1.50 | 1.66⅔ | 1.83⅓ | 2 00 | 2.16⅔ | 2.33⅓ | 2 50 | 2.66⅔ | 2 83⅓ | 3.00 |
| 2 | .33⅓ | .66⅔ | 1.00 | 1.33⅓ | 1.66⅔ | 2.00 | 2 33⅓ | 2 66⅔ | 3 00 | 3 33⅓ | 3.66⅔ | 4.00 | 4 33⅓ | 4 66⅔ | 5.00 | 5.33⅓ | 5 66⅔ | 6.00 |
| 3 | .50 | 1.00 | 1.50 | 2.00 | 2.50 | 3.00 | 3 50 | 4.00 | 4 50 | 5 00 | 5 50 | 6.00 | 6 50 | 7.00 | 7.50 | 8.00 | 8 50 | 9.00 |
| 4 | .66⅔ | 1.33⅓ | 2.00 | 2.66⅔ | 3.33⅓ | 4.00 | 4.66⅔ | 5.33⅓ | 6.00 | 6.66⅔ | 7.33⅓ | 8 00 | 8.66⅔ | 9.33⅓ | 10.00 | 10.66⅔ | 11.33⅓ | 12.00 |
| 5 | .83⅓ | 1.66⅔ | 2.50 | 3.33⅓ | 4.16⅔ | 5.00 | 5.83⅓ | 6 66⅔ | 7.50 | 8.33⅓ | 9.16⅔ | 10.00 | 10 83⅓ | 11.66⅔ | 12.50 | 13.33⅓ | 14.16⅔ | 15 00 |
| 6 | 1.00 | 2.00 | 3.00 | 4.00 | 5.00 | 6.00 | 7.00 | 8.00 | 9.00 | 10.00 | 11.00 | 12.00 | 13.00 | 14.00 | 15.00 | 16.00 | 17.00 | 18.00 |

EXAMPLE:—What will the wages for 4 days and 7 hours amount to at $9.00 per week? Ans., $7.05.

The above table is based on 10 hours a day. To find the amount for any number of days, 8 or 9 hours a day, multiply the number opposite 8 hours or 9 hours, as the case may be, by the number of days.

Thus, 8 days and 6 hours at $11.00 a week, working 9 hours a day, will amount to $1.65×8=$13.20+$1.10, amount for 6 hours=$14.30.

Eight days and 6 hours at $11.00 a week, working 8 hours a day, will amount to $1.46 2/3×8=11.73+$1.10. amount for 6 hours=$12.83.



## How to Calculate the Weight of Coal in a Bin or Box.

A solid cubic foot of anthracite coal weighs about 93 pounds. When broken for use it weighs about 54 pounds. Bituminous coal when broken up for use weighs about 50 pounds.

RULE:—Multiply the length in feet by the height in feet, and again by the breadth in feet, and this result by 54 for anthracite coal, or by 50 for bituminous coal, and the result will equal the number of pounds.

To find the number of tons, divide by 2,000.

EXAMPLE:—A coal bin is ten feet long, 8 feet wide, and 5 feet high. How many tons of anthracite coal will it hold?

SOLUTION—$10\times8\times5\times54=21{,}600$. $21{,}600\div2{,}000=10$ tons and 1,600 pounds.

## Amount of Charcoal in a Bin.

Multiply length, breadth, and height (all in inches) together, and divide by 2571, the number of cubic inches in a bushel of charcoal.

## How to Find the Number of Cords in a Pile of Wood.

A cord of wood is a pile 8 feet long, 4 feet wide and 4 feet high and contains 128 cubic feet.

RULE:—Multiply the length in feet by the width in feet and that result by the height in feet and divide the product by 128 and you have the number of cords.

Example:—How many cords in a pile of wood 4 feet wide, 7 feet high, 24 feet long.

SOLUTION:—$4\times7\times24=672$ cubic feet. $672\div128=5\frac{1}{4}$ cords. Ans.

A cord of wood contains 128 cubic feet when the wood is cut 4 feet long. It is an error to suppose that a cord should always contain 128 cubic feet, as, for instance, cooking stove wood is seldom over 20 inches in width when corded, but the width is counted the same as if it was four feet. As for instance in the following example:

RULE: Multiply the length of the pile by the height, and divide by 32.

EXAMPLE:—How many cords are contained in a pile of stove wood 17 feet long, 6 feet high and 19 inches in width?

SOLUTION:—17 length $\times$ 6 height=102; $102 \div 32 = 3\frac{3}{16}$ cords. Ans.

## How to Find the Weight of Cattle By Measurement.

To find the approximate weight, measure as follows: 1. The girth behind the shoulders. 2. The length from the forepart of the shoulder-blade along the back to the bone at the tail, in a vertical line with the buttocks. Then multiply the square of the girth in feet by five times the length in feet. Divide the product by 1.5 for average cattle (if cattle be very fat, by 1.425; if very lean, by 1.575) and the quotient will be the dressed weight of the quarters. Thus: The girth of a steer is 6.5 feet, and the length from the shoulder-blade to the tail bone is 5.25. The square of 6.5 is 42.25, and 5 times 5.25 is 26.25. Multiplying these together gives 1109.0625, which, when divided by 1.5, produces 739.375 lbs., the approximate net weight of the steer after being dressed.

## The Short Method.

Multiply the distance around the animal (back of the fore-shoulder) by itself, and then multiply that result by 17.5 and you have the weight of the animal (nearly.)

## Weight of Hogs.

What will be the cost of 3345 pounds of live hogs, at $3.25 per hundred weight?—See table, next page.

3300 @ 3.25=107.25.
45 @ 3.25= 1.46.

108.71. Ans.

## Weight of Cattle.

What will 2255 lbs. of live cattle cost at $13.60 per hundred. (See table next page.)

2200 lbs. @ $13.60 = { 2200 @ $10.00 ; 2200 @ 3.00 ; 2200 @ .60 } = $220.00 + $66.00 + $13.20 = $299.20

55 lbs. @ 13.60 = { 55 @ $10.00 ; 55 @ 3.00 ; 55 @ .60 } = 5.50 + 1.65 + .33 = 7.48

Total ..... $306.68

## Hog and Cattle Table.

The first column gives the number of pounds, and the top of each column the price per hundred weight.

| Weight | 5c | 10c | 15c | 20c | 30c | 40c | 50c | 60c | 70c | 80c | 90c |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | .00 | .00 | .00 | .01 | .01 | .01 | .02 | .02 | .02 | .02 | .03 |
| 5 | .00 | .01 | .01 | .01 | .02 | .02 | .03 | .04 | .03 | .04 | .05 |
| 10 | .01 | .01 | .02 | .02 | .03 | .04 | .05 | .06 | .07 | .08 | .09 |
| 15 | .01 | .02 | .02 | .03 | .05 | .06 | .08 | .09 | .11 | .12 | .14 |
| 20 | .01 | .02 | .03 | .04 | .06 | .08 | .10 | .12 | .14 | .16 | .18 |
| 25 | .01 | .03 | .04 | .05 | .08 | .10 | .13 | .15 | .18 | .20 | .23 |
| 30 | .02 | .03 | .05 | .06 | .09 | .12 | .15 | .18 | .21 | .24 | .27 |
| 35 | .02 | .04 | .05 | .07 | .11 | .14 | .18 | .21 | .25 | .28 | .32 |
| 40 | .02 | .04 | .06 | .08 | .12 | .16 | .20 | .24 | .28 | .32 | .36 |
| 45 | .02 | .05 | .07 | .09 | .14 | .18 | .23 | .27 | .32 | .36 | .41 |
| 50 | .03 | .05 | .08 | .10 | .15 | .20 | .25 | .30 | .35 | .40 | .45 |
| 55 | .03 | .06 | .08 | .11 | .17 | .22 | .28 | .33 | .39 | .44 | .50 |
| 60 | .03 | .06 | .09 | .12 | .18 | .24 | .30 | .36 | .42 | .48 | .54 |
| 65 | .03 | .07 | .10 | .13 | .20 | .26 | .33 | .39 | .46 | .52 | .59 |
| 70 | .04 | .07 | .11 | .14 | .21 | .28 | .35 | .42 | .49 | .56 | .63 |
| 75 | .04 | .08 | .11 | .15 | .23 | .30 | .38 | .45 | .53 | .60 | .68 |
| 80 | .04 | .08 | .12 | .16 | .24 | .32 | .40 | .48 | .56 | .64 | .72 |
| 85 | .04 | .09 | .13 | .17 | .26 | .34 | .43 | .51 | .60 | .68 | .77 |
| 90 | .05 | .09 | .14 | .18 | .27 | .36 | .45 | .54 | .63 | .72 | .81 |
| 95 | .05 | .10 | .14 | .19 | .29 | .38 | .48 | .57 | .67 | .76 | .86 |
| 100 | .05 | .10 | .15 | .20 | .30 | .40 | .50 | .60 | .70 | .80 | .90 |
| 200 | .10 | .20 | .30 | .40 | .60 | .80 | 1.00 | 1.20 | 1.40 | 1.60 | 1.80 |
| 300 | .15 | .30 | .45 | .60 | .90 | 1.20 | 1.50 | 1.80 | 2.10 | 2.40 | 2.70 |
| 400 | .20 | .40 | .60 | .80 | 1.20 | 1.60 | 2.00 | 2.40 | 2.80 | 3.20 | 3.60 |
| 500 | .25 | .50 | .75 | 1.00 | 1.50 | 2.00 | 2.50 | 3.00 | 3.50 | 4.00 | 4.50 |
| 600 | .30 | .60 | .90 | 1.20 | 1.80 | 2.40 | 3.00 | 3.60 | 4.20 | 4.30 | 5.40 |
| 700 | .35 | .70 | 1.05 | 1.40 | 2.10 | 2.80 | 3.50 | 4.20 | 4.90 | 5.60 | 6.30 |
| 800 | .40 | .80 | 1.20 | 1.60 | 2.40 | 3.20 | 4.00 | 4.80 | 5.60 | 6.40 | 7.20 |
| 900 | .45 | .90 | 1.35 | 1.80 | 2.70 | 3.60 | 4.50 | 5.40 | 6.30 | 7.20 | 8.10 |
| 1000 | .50 | 1.00 | 1.50 | 2.00 | 3.00 | 4.00 | 5.00 | 6.00 | 7.00 | 8.00 | 9.00 |
| 1100 | .55 | 1.10 | 1.65 | 2.20 | 3.30 | 4.40 | 5.50 | 6.60 | 7.70 | 8 80 | 9.90 |
| 1200 | .60 | 1.20 | 1.80 | 2.40 | 3.60 | 4.80 | 6 00 | 7.20 | 8.40 | 9.60 | 10.80 |
| 1300 | .65 | 1.30 | 1.95 | 2 60 | 3.90 | 5.20 | 6.50 | 7 80 | 9.10 | 10.40 | 11.70 |
| 1400 | .70 | 1.40 | 2.10 | 2 80 | 4.20 | 5.60 | 7.00 | 8.40 | 9.80 | 11.20 | 12.60 |
| 1500 | .75 | 1.50 | 2.25 | 3.00 | 4.50 | 6.00 | 7.50 | 9.00 | 10.50 | 12.00 | 13.50 |
| 1600 | .80 | 1.60 | 2.40 | 3.20 | 4.80 | 6.40 | 8.00 | 9.60 | 11.20 | 12.80 | 14.40 |
| 1700 | .85 | 1.70 | 2.55 | 3.40 | 5.10 | 6.80 | 8.50 | 10.20 | 11.90 | 13.60 | 15.30 |
| 1800 | .90 | 1.80 | 2 70 | 3.60 | 5.40 | 7.20 | 9.00 | 10.80 | 12 60 | 14 40 | 16.20 |
| 1900 | .95 | 1.90 | 2.85 | 3.80 | 5.70 | 7.60 | 9.50 | 11.40 | 13.30 | 15.20 | 17.10 |
| 2000 | 1.00 | 2.00 | 3.00 | 4.00 | 6.00 | 8 00 | 10.00 | 12.00 | 14.00 | 16.00 | 18.00 |
| 2100 | 1.05 | 2.10 | 3.15 | 4.20 | 6.30 | 8.40 | 10.50 | 12.60 | 14.70 | 16 80 | 18.90 |
| 2200 | 1.10 | 2 20 | 3.30 | 4 40 | 6.60 | 8.80 | 11 00 | 13.20 | 15.40 | 17 60 | 19.80 |
| 2300 | 1.15 | 2.30 | 3.45 | 4.60 | 6.90 | 9.20 | 11.50 | 13.80 | 16.10 | 18.40 | 20.70 |
| 2400 | 1.20 | 2.40 | 3 60 | 4 80 | 7.20 | 9.60 | 12.00 | 14.40 | 16.80 | 19.20 | 21.60 |
| 2500 | 1.25 | 2.50 | 3.75 | 5.00 | 7.50 | 10.00 | 12.50 | 15 00 | 17.50 | 20 00 | 22.50 |
| 2600 | 1.30 | 2.60 | 3.90 | 5.20 | 7.80 | 10.40 | 13 00 | 15.60 | 18.20 | 20.80 | 23.40 |
| 2700 | 1.35 | 2.70 | 4 05 | 5.40 | 8.10 | 10.80 | 13 50 | 16 20 | 18.90 | 21.60 | 24.30 |
| 2800 | 1.40 | 2.80 | 4.20 | 5 60 | 8.40 | 11.20 | 14 00 | 16.80 | 19 60 | 22 40 | 25.20 |
| 2900 | 1.45 | 2.90 | 4.35 | 5.80 | 8.70 | 11.60 | 14 50 | 17.40 | 20 30 | 23.20 | 26.10 |
| 3000 | 1.50 | 3.00 | 4.50 | 6.00 | 9.00 | 12 00 | 15.00 | 18 00 | 21 00 | 24 00 | 27.00 |
| 3100 | 1.55 | 3.10 | 4.65 | 6.20 | 9.30 | 12.40 | 15.50 | 18 60 | 21.70 | 24.80 | 27.90 |
| 3200 | 1.60 | 3.20 | 4.80 | 6.40 | 9.60 | 12 80 | 16 00 | 19.20 | 22.40 | 25 60 | 28.80 |
| 3300 | 1.65 | 3.30 | 4.95 | 6.60 | 9.90 | 13 20 | 16.50 | 19.80 | 23.10 | 26.40 | 29.70 |
| 3400 | 1.70 | 3.40 | 5.10 | 6.80 | 10.20 | 13.60 | 17.00 | 20.40 | 23.80 | 27.20 | 30.60 |
| 3500 | 1.75 | 3 50 | 5.25 | 7.00 | 10.50 | 14.00 | 17.50 | 21.00 | 24.50 | 28.00 | 31.50 |
| 3600 | 1.80 | 3.60 | 5.40 | 7.20 | 10.80 | 14 40 | 18.00 | 21.60 | 25.20 | 28 80 | 32.40 |
| 3700 | 1.85 | 3.70 | 5.55 | 7.40 | 11.10 | 14.80 | 18.50 | 22.20 | 25.90 | 29 60 | 33.30 |
| 3800 | 1.90 | 3.80 | 5.70 | 7.60 | 11.40 | 15 20 | 19.00 | 22.80 | 26.60 | 30.40 | 34.20 |
| 3900 | 1.95 | 3.90 | 5.85 | 7.80 | 11.70 | 15.60 | 19.50 | 23.40 | 27.30 | 31.20 | 35.10 |
| 4000 | 2.00 | 4.00 | 6.00 | 8.00 | 12 00 | 16.00 | 20.00 | 24.00 | 28.00 | 32.00 | 36.00 |

## HOG AND CATTLE TABLE.

*The first column gives the number of pounds, and the top of each column the price per hundred weight.*

| Weight | $1.00 | $2.00 | $3.00 | $4.00 | $5.00 | $6.00 | $7.00 | $8.00 | $9.00 | $10 | $20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3... | .03 | .06 | .09 | .12 | .15 | .18 | .21 | .24 | .27 | .30 | .60 |
| 5... | .05 | .10 | .15 | .20 | .25 | .30 | .35 | .40 | .45 | .50 | 1.00 |
| 10... | .10 | .20 | .30 | .40 | .50 | .60 | .70 | .80 | .90 | 1.00 | 2.00 |
| 15... | .15 | .30 | .45 | .60 | .75 | .90 | 1.05 | 1.20 | 1.35 | 1.50 | 3.00 |
| 20... | .20 | .40 | .60 | .80 | 1.00 | 1.20 | 1.40 | 1.60 | 1.80 | 2 00 | 4.00 |
| 25... | .25 | .50 | .75 | 1.00 | 1.25 | 1.50 | 1.75 | 2.00 | 2.25 | 2.50 | 5.00 |
| 30... | .30 | .60 | .90 | 1.20 | 1.50 | 1.80 | 2.10 | 2.40 | 2.70 | 3.00 | 6.00 |
| 35... | .35 | .70 | 1.05 | 1.40 | 1.75 | 2.10 | 2.45 | 2.80 | 3.15 | 3.50 | 7.00 |
| 40... | .40 | .80 | 1.20 | 1.60 | 2.00 | 2.40 | 2.80 | 3 20 | 3.60 | 4.00 | 8.00 |
| 45... | .45 | .90 | 1.35 | 1.80 | 2 25 | 2.70 | 3.15 | 3.60 | 4.05 | 4.50 | 9.00 |
| 50.... | .50 | 1.00 | 1 50 | 2.00 | 2.50 | 3.00 | 3.50 | 4.00 | 4.50 | 5.00 | 10.00 |
| 55... | .55 | 1.10 | 1.65 | 2 20 | 2.75 | 3.30 | 3.85 | 4.40 | 4.95 | 5.50 | 11.00 |
| 60... | .60 | 1.20 | 1.80 | 2.40 | 3.00 | 3.60 | 4.20 | 4.80 | 5.40 | 6.00 | 12.00 |
| 65... | .65 | 1.30 | 1 95 | 2.60 | 3 25 | 3 90 | 4.55 | 5.20 | 5.85 | 6.50 | 13 00 |
| 70... | .70 | 1.40 | 2.10 | 2.80 | 3.50 | 4.20 | 4.90 | 5.60 | 6.30 | 7.00 | 14.00 |
| 75... | .75 | 1.50 | 2.25 | 3.00 | 3.75 | 4 50 | 5.25 | 6.00 | 6.75 | 7.50 | 15.00 |
| 80... | .80 | 1.60 | 2.40 | 3.20 | 4.00 | 4.80 | 5.60 | 6.40 | 7.20 | 8.00 | 16.00 |
| 85... | .85 | 1.70 | 2.55 | 3.40 | 4.25 | 5.10 | 5.95 | 6.80 | 7.65 | 8.50 | 17.00 |
| 90... | .90 | 1.80 | 2.70 | 3.60 | 4.50 | 5.40 | 6.30 | 7.20 | 8.10 | 9.00 | 18.00 |
| 95... | .95 | 1.90 | 2 85 | 3 80 | 4.75 | 5.70 | 6.65 | 7.60 | 8 55 | 9.50 | 19.00 |
| 100... | 1.00 | 2.00 | 3.00 | 4.00 | 5.00 | 6.00 | 7.00 | 8.00 | 9.00 | 10.00 | 20.00 |
| 200... | 2.00 | 4.00 | 6 00 | 8 00 | 10.00 | 12.00 | 14.00 | 16.00 | 18.00 | 20.00 | 40.00 |
| 300... | 3.00 | 6.00 | 9.00 | 12.00 | 15 00 | 18.00 | 21.00 | 24.00 | 27.00 | 30.00 | 60.00 |
| 400... | 4.00 | 8 00 | 12.00 | 16.00 | 20.00 | 24.00 | 28.00 | 32.00 | 36.00 | 40.00 | 80 00 |
| 500... | 5.00 | 10 00 | 15.00 | 20.00 | 25.00 | 30.00 | 35.00 | 40.00 | 45.00 | 50.00 | 100.00 |
| 600... | 6.00 | 12 00 | 18.00 | 24.00 | 30.00 | 36.00 | 42.00 | 48.00 | 54.00 | 60.00 | 120.00 |
| 700... | 7.00 | 14.00 | 21.00 | 28 00 | 35.00 | 42.00 | 49.00 | 56.00 | 63.00 | 70.00 | 140.00 |
| 800... | 8.00 | 16 00 | 24.00 | 32 00 | 40.00 | 48.00 | 56.00 | 64.00 | 72.00 | 80.00 | 160.00 |
| 900... | 9.00 | 18 00 | 27 00 | 36.00 | 45.00 | 54.00 | 63.00 | 72.00 | 81.00 | 90.00 | 180.00 |
| 1000... | 10.00 | 20.00 | 30.00 | 40 00 | 50 00 | 60.00 | 70.00 | 80.00 | 90.00 | 100.00 | 200.00 |
| 1100... | 11.00 | 22.00 | 33 00 | 44 00 | 55.00 | 66.00 | 77.00 | 88.00 | 99.00 | 110.00 | 220.00 |
| 1200... | 12 00 | 24.00 | 36.00 | 48 00 | 60.00 | 72.00 | 84.00 | 96.00 | 108.00 | 120.00 | 240.00 |
| 1300... | 13.00 | 26 00 | 39 00 | 52.00 | 65.00 | 78.00 | 91.00 | 104.00 | 117.00 | 130.00 | 260.00 |
| 1400... | 14.00 | 28 00 | 42 00 | 56.00 | 70.00 | 84.00 | 98.00 | 112.00 | 126.00 | 140.00 | 280.00 |
| 1500... | 15.00 | 30 00 | 45.00 | 60.00 | 75.00 | 90.00 | 105.00 | 120.00 | 135.00 | 150.00 | 300.00 |
| 1600... | 16.00 | 32.00 | 48.00 | 64.00 | 80 00 | 96.00 | 112.00 | 128.00 | 144.00 | 160.00 | 320.00 |
| 1700... | 17.00 | 34.00 | 51 00 | 68.00 | 85.00 | 102.00 | 119.00 | 136.00 | 153.00 | 170.00 | 340.00 |
| 1800... | 18.00 | 36.00 | 54.00 | 72 00 | 90.00 | 108.00 | 126.00 | 144.00 | 162.00 | 180.00 | 360.00 |
| 1900... | 19.00 | 38 00 | 57.00 | 76.00 | 95.00 | 114.00 | 133.00 | 152 00 | 171.00 | 190.00 | 380.00 |
| 2000... | 20.00 | 40 00 | 60 00 | 80 00 | 100 00 | 120.00 | 140.00 | 160.00 | 180.00 | 200.00 | 400.00 |
| 2100... | 21.00 | 42.00 | 63.00 | 84.00 | 105 00 | 126.00 | 147.00 | 168.00 | 189.00 | 210.00 | 420.00 |
| 2200... | 22.00 | 44.00 | 66.00 | 88 00 | 110.00 | 132.00 | 154.00 | 176.00 | 198.00 | 220.00 | 440.00 |
| 2300... | 23.00 | 46.00 | 69.00 | 92.00 | 115 00 | 138.00 | 161.00 | 184.00 | 207.00 | 230.00 | 460.00 |
| 2400... | 24.00 | 48.00 | 72.00 | 96.00 | 120.00 | 144.00 | 168.00 | 192.00 | 216.00 | 240.00 | 480.00 |
| 2500... | 25.00 | 50.00 | 75.00 | 100.00 | 125.00 | 150.00 | 175.00 | 200.00 | 225.00 | 250.00 | 500.00 |
| 2600... | 26.00 | 52.00 | 78 00 | 104.00 | 130 00 | 156.00 | 182.00 | 208.00 | 234.00 | 260.00 | 520.00 |
| 2700... | 27.00 | 54 00 | 81.00 | 108 00 | 135.00 | 162.00 | 189.00 | 216.00 | 243.00 | 270.00 | 540.00 |
| 2800... | 28.00 | 56 00 | 84.00 | 112 00 | 140.00 | 168.00 | 196.00 | 224.00 | 252.00 | 280.00 | 560.00 |
| 2900... | 29.00 | 58 00 | 87.00 | 116.00 | 145 00 | 174 00 | 203.00 | 232 00 | 261.00 | 290.00 | 580.00 |
| 3000... | 30.00 | 60.00 | 90.00 | 120 00 | 150 00 | 180.00 | 210.00 | 240.00 | 270.00 | 300.00 | 600.00 |
| 3100... | 31.00 | 62 00 | 93.00 | 124.00 | 155 00 | 186.00 | 217.00 | 248 00 | 279.00 | 310.00 | 620.00 |
| 3200... | 32.00 | 64 00 | 96 00 | 128 00 | 160.00 | 192 00 | 224.00 | 256.00 | 288.00 | 320.00 | 640.00 |
| 3300... | 33 00 | 66 00 | 99.00 | 132.00 | 165.00 | 198 00 | 231 00 | 264.00 | 297.00 | 330.00 | 660.00 |
| 3400... | 34.00 | 68.00 | 102.00 | 136.00 | 170 00 | 204.00 | 238 00 | 272 00 | 306 00 | 340.00 | 680 00 |
| 3500... | 35 00 | 70.00 | 105 00 | 140.00 | 175.00 | 210.00 | 245 00 | 280 00 | 315.00 | 350.00 | 700.00 |
| 3600... | 36.00 | 72.00 | 108.00 | 144.00 | 180 00 | 216.00 | 252.00 | 288 00 | 324.00 | 360.00 | 720.00 |
| 3700... | 37.00 | 74.00 | 111.00 | 148 00 | 185.00 | 222 00 | 259.00 | 296 00 | 333 00 | 370 00 | 740.00 |
| 3800... | 38.00 | 76.00 | 114 00 | 152.00 | 190.00 | 228.00 | 266.00 | 304 00 | 342.00 | 380 00 | 760.00 |
| 3900... | 39.00 | 78.00 | 117.00 | 156.00 | 195.00 | 234.00 | 273.00 | 312 00 | 351.00 | 390.00 | 780.00 |
| 4000... | 40 00 | 80.00 | 120.00 | 160.00 | 200.00 | 240.00 | 280.00 | 320.00 | 360.00 | 400.00 | 800.00 |

## Number of Pounds to the Bushel, Legal Weight, in Different States.

| STATES | Alfalfa Seed | Apples, Green | Apples, Dried | Barley | Beans | Beans, Castor | Beets | Blue-Grass Seed | Bran | Broom Corn Seed | Buckwheat | Carrots | Charcoal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alabama | | | 24 | 47 | 60 | | | | | | | | |
| Arkansas | | 50 | 24 | 48 | 60 | | | 14 | 20 | 48 | 52 | | |
| California | | | | 50 | | | | | | | 40 | | |
| Colorado | | | | 48 | 60 | | | 14 | | | 52 | | |
| Connecticut | | 48 | 25 | 48 | 60 | | 60 | | 20 | | 48 | 50 | 20 |
| Delaware | | | | | | | | | | | | | 26 |
| Florida | | 48 | 24 | 48 | 60 | 48 | | | 20 | | | | |
| Georgia | | | 24 | 47 | 60 | | | 14 | 20 | | 52 | | |
| Hawaii | | | | 48 | | | | | | | | | |
| Idaho | 60 | 48 | 24 | 48 | 60 | 46 | 56 | 14 | 20 | | 50 | 50 | |
| Illinois | 60 | 50 | 24 | 48 | 60 | 46 | 60 | 14 | 20 | 48 | 52 | 50 | 20 |
| Indiana | 60 | 48 | 25 | 48 | 60 | | 60 | 14 | 20 | | 50 | 50 | 20 |
| Iowa | 60 | 48 | 24 | 48 | 60 | 50 | 56 | 14 | 20 | 50 | 48 | 50 | 20 |
| Kansas | 60 | 50 | 24 | 48 | 60 | 46 | 60 | 14 | | 30 | 48 | 50 | |
| Kentucky | | | 24 | 47 | 60 | 45 | | 14 | 20 | | 56 | | |
| Louisiana | | | | 32 | | | | | | | | | |
| Maine | 60 | 44 | 25 | 48 | 60 | | 60 | | 20 | | 48 | 50 | |
| Maryland | 60 | 50 | 28 | 48 | 60 | 50 | | 14 | 20 | | 48 | 50 | |
| Massachusetts | | 48 | 25 | 48 | 60 | | 60 | | 20 | | 48 | 50 | |
| Michigan | | 48 | 22 | 48 | 60 | 46 | | 14 | | | 48 | | |
| Minnesota | 60 | 50 | 28 | 48 | 60 | | 50 | 14 | | 57 | 50 | 45 | |
| Mississippi | | | 26 | 48 | 60 | 46 | | 14 | 20 | | 48 | | |
| Missouri | | 48 | 24 | 48 | 60 | 46 | | 14 | 20 | | 52 | 50 | |
| Montana | | 45 | | 48 | 60 | | 50 | 14 | 20 | | 52 | 50 | |
| Nebraska | 60 | 48 | 24 | 48 | 60 | 46 | 56 | 14 | 20 | 50 | 50 | 50 | 20 |
| Nevada | 60 | 48 | 24 | 48 | 60 | 46 | 56 | 14 | 20 | | 50 | 50 | |
| New Hampshire | | 48 | 25 | 48 | 60 | | 60 | | 20 | | 48 | 50 | |
| New Jersey | | 50 | 25 | 48 | 60 | | 60 | | | | 48 | 50 | |
| New Mexico | 60 | 45 | 24 | 48 | 60 | 46 | 56 | 14 | 20 | | 52 | 50 | 20 |
| New York | | 48 | 25 | 48 | 60 | | | | 20 | | 48 | 50 | |
| North Carolina | 60 | 48 | 24 | 48 | 60 | 46 | 50 | 14 | 20 | 44 | 50 | 50 | 22 |
| North Dakota | | 50 | | 48 | 60 | | 60 | | 20 | 30 | 42 | | |
| Ohio | | 48 | 24 | 48 | 60 | | 56 | | | 45 | 50 | 50 | |
| Oklahoma | 60 | 48 | 24 | 48 | 60 | 46 | | 14 | 20 | 48 | 52 | 50 | |
| Oregon | | 45 | 28 | 46 | | | | | | | 42 | | |
| Pennsylvania | 60 | 45 | 25 | 47 | 60 | 46 | 56 | 14 | 20 | 50 | 48 | 50 | 20 |
| Rhode Island | | 48 | 25 | 48 | 60 | 46 | 50 | | 20 | | 48 | 50 | 20 |
| South Carolina | | 50 | 24 | 48 | 60 | 46 | 50 | 14 | 20 | 42 | 50 | 50 | 22 |
| South Dakota | 60 | 48 | 24 | 48 | 60 | 46 | 56 | 14 | 20 | 50 | 52 | 50 | 20 |
| Tennessee | | 50 | 24 | 48 | 60 | 46 | 50 | 14 | 20 | 42 | 50 | 50 | 22 |
| Texas | | 45 | 28 | 48 | 60 | | | | 20 | | 42 | | 22 |
| Vermont | 60 | 48 | | 48 | 60 | | 60 | | | | 48 | 50 | 20 |
| Virginia | 60 | | 28 | 48 | 60 | 46 | | 14 | 20 | | 48 | 50 | |
| Washington | | 45 | 28 | 48 | | | | | | | 42 | | |
| West Virginia | | 50 | 24 | 48 | 60 | 46 | | 14 | 20 | 57 | 52 | 50 | 20 |
| Wisconsin | 60 | 44 | 25 | 48 | 60 | 46 | 50 | 14 | 20 | | 50 | 50 | |
| Federal Statutes | | 50 | | 48 | 60 | 50 | | | | | 48 | | |

## Number of Pounds to the Bushel, Legal Weight, in Different States.

| STATES | Clover Seed | Corn on Cob | Corn Shelled | Corn Meal | Cotton Seed | Cranberries | Cucumbers | Flaxseed | Hempseed | Hickory Nuts | Hugarian Grass-seed | Kafir Corn | Lime |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alabama | | 70 | 56 | 43 | 32 | | | | | | | | |
| Arkansas | 60 | 70 | 56 | 48 | 33½ | | | 56 | | | | | |
| California | | | 52 | | | | | | | | | | |
| Colorado | 60 | 70 | 56 | | | | | | 44 | | | | 80 |
| Connecticut | 60 | | 56 | 50 | 30 | | | 55 | | | | | 70 |
| Delaware | | | 56 | | | | | | | | | | |
| Florida | | 70 | 56 | 48 | 32 | | | | | | | | |
| Georgia | 60 | 70 | 56 | 48 | 30 | | | 56 | 44 | | | | 80 |
| Hawaii | | | 56 | | | | | | | | | | |
| Idaho | 60 | 70 | 56 | 48 | | | | 56 | 44 | | 50 | 56 | 80 |
| Illinois | 60 | 70 | 56 | 48 | 32 | 33 | 48 | 56 | 44 | 50 | 50 | 56 | 80 |
| Indiana | 60 | | 56 | 50 | | 33 | 48 | 56 | 44 | 50 | | 56 | |
| Iowa | 60 | 70 | 56 | 48 | | | 48 | 56 | 44 | 50 | 50 | 56 | 80 |
| Kansas | 60 | 70 | 56 | | | | 48 | 56 | 44 | 50 | | 56 | 80 |
| Kentucky | 60 | 70 | 56 | 50 | | | | 56 | 44 | | 50 | | 35 |
| Louisiana | | | 56 | | | | | | | | | | |
| Maine | 60 | | 56 | 50 | 30 | 32 | | 56 | 44 | | 48 | | 70 |
| Maryland | 60 | 70 | 56 | 48 | | | | 56 | 44 | | 50 | | 80 |
| Massachusetts | 60 | | 56 | 50 | 30 | 32 | | 55 | | | | | 70 |
| Michigan | 60 | 70 | 56 | 50 | | 40 | | 56 | 44 | | 50 | | 70 |
| Minnesota | 60 | 70 | 56 | | | 36 | 48 | 56 | 50 | 50 | 48 | | 80 |
| Mississippi | 60 | 72 | 56 | 48 | 32 | | | 56 | 44 | | 50 | | 80 |
| Missouri | 60 | 70 | 56 | 50 | 33 | | 48 | 56 | 44 | | 48 | | |
| Montana | 60 | 70 | 56 | 50 | | | | 56 | 44 | | 50 | | 80 |
| Nebraska | 60 | 70 | 56 | | | | | 56 | 44 | 50 | | 56 | 80 |
| Nevada | 60 | 70 | 56 | 48 | | | | 56 | 48 | | 50 | 56 | |
| New Hampshire | 60 | | 56 | 50 | | 32 | | 56 | | | | | 70 |
| New Jersey | 60 | | 56 | | | | | 56 | | | | | |
| New Mexico | 60 | 70 | 56 | 50 | 32 | | 48 | 56 | 44 | | 50 | 56 | 80 |
| New York | 60 | | 56 | 50 | 30 | | | 55 | | | | | 70 |
| North Carolina | 60 | 70 | 56 | | 30 | | 48 | 56 | 44 | 50 | 48 | 50 | 80 |
| North Dakota | 60 | 70 | 56 | | | | | 56 | | | | | 80 |
| Ohio | 60 | 68 | 56 | 48 | | | | 56 | 44 | 50 | 50 | 56 | 70 |
| Oklahoma | 60 | 70 | 56 | 50 | 32 | | 48 | 56 | 44 | | 48 | 56 | |
| Oregon | 60 | | 56 | | | | | | | | | | |
| Pennsylvania | 60 | 70 | 56 | 50 | | 40 | 50 | 56 | 44 | 50 | 50 | 56 | 80 |
| Rhode Island | 60 | 70 | 56 | 50 | 30 | | | 53 | 44 | | 50 | | 70 |
| South Carolina | 60 | 70 | 56 | 50 | 30 | | 48 | 56 | 44 | 50 | 48 | | 80 |
| South Dakota | 60 | 70 | 56 | 50 | | | 48 | 56 | 44 | 50 | 50 | 56 | 80 |
| Tennessee | 60 | 70 | 56 | 50 | 28 | | 48 | 56 | 44 | | 48 | | 80 |
| Texas | 60 | 70 | 56 | | 32 | | | 56 | 44 | | 48 | | |
| Vermont | 60 | 70 | 56 | 50 | | 32 | 48 | 55 | | | 50 | 56 | |
| Virginia | 60 | 70 | 56 | 48 | 30 | | | 56 | 44 | | 48 | | 80 |
| Washington | 60 | | 53 | | | | | 53 | | | | | |
| West Virginia | 60 | 68 | 56 | 48 | | 36 | 50 | 56 | 44 | 50 | 50 | | 70 |
| Wisconsin | 60 | | 56 | 50 | 30 | 35 | 50 | 53 | 44 | 50 | 48 | | 80 |
| Federal Statutes | | | 56 | | | | | 53 | | | | | |

## Number of Pounds to the Bushel, Legal Weight, in Different States.

| STATES | Millet | Oats | Onions | Orchard Grass-seed | Parsnips | Peaches | Peaches, Dried | Peanuts | Pears | Peas | Plums | Potatoes | Potatoes, Sweet |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alabama | | 32 | | | | | 38 | | | 60 | | 60 | 55 |
| Arkansas | 50 | 32 | 57 | 14 | | | 33 | | | 60 | | 60 | 50 |
| California | | 32 | | | | | | | | | | | |
| Colorado | | 32 | 57 | | | | | | | | | 60 | |
| Connecticut | | 32 | 52 | | 45 | | 33 | | | 60 | | 60 | 54 |
| Delaware | | | | | | | | | | | | | |
| Florida | 50 | 32 | 56 | | | 54 | 24 | 22 | | 55 | 40 | 60 | 56 |
| Georgia | | 32 | 57 | | | | 38 | 25 | | 60 | | 60 | 55 |
| Hawaii | | 32 | | | | | | | | | | | |
| Idaho | 50 | 32 | 57 | | 50 | 48 | 33 | | | 60 | | 60 | 50 |
| Illinois | 50 | 32 | 57 | 14 | 50 | 48 | 33 | 20 | 58 | 60 | | 60 | 50 |
| Indiana | 50 | 32 | 57 | 14 | 55 | 48 | 33 | | 50 | | | 60 | 50 |
| Iowa | 50 | 32 | 52 | 14 | 45 | 48 | 33 | 22 | 45 | 60 | 48 | 60 | 50 |
| Kansas | 50 | 32 | 57 | | 48 | 48 | 33 | | 45 | 60 | 52 | 60 | 50 |
| Kentucky | 50 | 32 | 57 | 14 | | | 39 | 24 | | 60 | | 60 | 55 |
| Louisiana | | 32 | | | | | | | | | | | |
| Maine | 50 | 32 | 52 | 14 | 45 | 48 | 33 | 20 | 58 | 60 | | 60 | 54 |
| Maryland | 50 | 32 | 54 | 14 | | 40 | | 22 | | 60 | | 60 | 60 |
| Massachusetts | | 32 | 52 | | 45 | 48 | 33 | 20 | 58 | 60 | | 60 | 54 |
| Michigan | 50 | 32 | 54 | 14 | | | 28 | | | 60 | | 60 | 56 |
| Minnesota | 48 | 32 | 52 | 14 | 42 | 48 | 28 | 22 | 45 | 60 | | 60 | 55 |
| Mississippi | 50 | 32 | 57 | | | | 33 | 24 | | 60 | | 60 | 54 |
| Missouri | 50 | 32 | 57 | 14 | 44 | 48 | 33 | | 48 | 60 | | 60 | 56 |
| Montana | | 32 | 57 | | 50 | | | | 45 | 60 | | 60 | |
| Nebraska | 50 | 32 | 57 | 14 | 50 | 48 | 33 | 22 | 45 | 60 | 48 | 60 | 50 |
| Nevada | 50 | 32 | 57 | | 50 | 48 | 33 | | | 60 | | 60 | 50 |
| New Hampshire | | 32 | 52 | | 45 | 48 | 33 | 20 | 58 | 60 | | 60 | 54 |
| New Jersey | | 32 | 57 | | | 50 | 33 | | | 60 | | 60 | 54 |
| New Mexico | 50 | 32 | 57 | 14 | 42 | 48 | 33 | 22 | 48 | 60 | | 60 | 50 |
| New York | | 32 | 57 | | | | 33 | | | 60 | | 60 | 54 |
| North Carolina | 50 | 32 | 57 | 14 | 50 | 50 | 25 | 22 | 56 | 60 | 64 | 56 | 56 |
| North Dakota | 50 | 32 | 52 | | | | | | | 60 | | 60 | 46 |
| Ohio | 50 | 32 | 56 | | 50 | 48 | 33 | | | 60 | 50 | 60 | 50 |
| Oklahoma | 50 | 32 | 57 | 14 | 44 | 48 | 33 | 22 | 48 | 60 | | 60 | 55 |
| Oregon | | 32 | | | | | 28 | | 45 | | | 60 | |
| Pennsylvania | 50 | 32 | 50 | 14 | 50 | 48 | 33 | 22 | 50 | 60 | 64 | 60 | 54 |
| Rhode Island | 50 | 32 | 50 | | 50 | 48 | 33 | | | 60 | | 60 | 54 |
| South Carolina | 50 | 32 | 56 | 14 | 50 | 50 | 25 | 23 | 36 | 60 | 64 | 60 | 50 |
| South Dakota | 50 | 32 | 57 | 14 | 42 | 48 | 33 | 20 | | 60 | | 60 | 46 |
| Tennessee | 50 | 32 | 56 | 14 | 50 | 50 | 26 | 23 | 56 | 60 | 64 | 60 | 50 |
| Texas | 50 | 32 | 57 | | | 50 | 28 | | | | | 60 | 55 |
| Vermont | 50 | 32 | 52 | | 45 | 48 | | 20 | 58 | 60 | 48 | 60 | 54 |
| Virginia | 50 | 32 | 57 | 14 | 50 | | 32 | 22 | | | | 60 | 56 |
| Washington | | 32 | | | | | 28 | | 45 | | | 60 | |
| West Virginia | 50 | 32 | 55 | 14 | 42 | 48 | 33 | | | 60 | | 60 | 50 |
| Wisconsin | 50 | 32 | 50 | | 44 | 48 | 33 | | 48 | 60 | | 60 | 54 |
| Federal Statutes | | 32 | | | | 50 | | | 50 | 60 | 50 | 60 | |

## Number of Pounds to the Bushel, Legal Weight, in Different States.

| STATES | Rapeseed | Red Top | Rice | Rutabagas | Rye | Rye Meal | Salt | Sorghum Seed | Timothy Seed | Tomatoes | Turnips | Walnuts | Wheat |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alabama | | | | | 56 | | | | | | 55 | | 60 |
| Arkansas | | 14 | | | 56 | | 50 | 50 | 60 | | 57 | | 60 |
| California | | | | | 54 | | | | | | | | 60 |
| Colorado | | | | | 56 | | 80 | | 45 | | | | 60 |
| Connecticut | | | 45 | 60 | 56 | 50 | 70 | | 45 | | 50 | | 60 |
| Delaware | | | | | | | | | | | | | 60 |
| Florida | | | | | 56 | | 60 | 56 | | | 54 | | 60 |
| Georgia | | | 43 | | 56 | | | | 45 | | 55 | | 60 |
| Hawaii | | | | | 56 | | | | | | | | 60 |
| Idaho | | | | | 56 | | 80 | 50 | 45 | 53 | 55 | | 60 |
| Illinois | 50 | 14 | 45 | 50 | 56 | 50 | 55 | 50 | 45 | 56 | 55 | 50 | 60 |
| Indiana | 50 | 14 | 45 | | 56 | | 50 | 50 | 45 | 60 | 55 | 50 | 60 |
| Iowa | 50 | 14 | | 60 | 56 | | 80 | 50 | 45 | 50 | 55 | 50 | 60 |
| Kansas | | | | 50 | 56 | | 80 | 50 | 45 | 56 | 55 | 50 | 60 |
| Kentucky | | | | | 56 | | 50 | | 45 | | 60 | | 60 |
| Louisiana | | | | | 32 | | | | | | | | 60 |
| Maine | | 14 | 44 | 60 | 56 | 50 | 70 | 50 | 45 | 56 | 60 | | 60 |
| Maryland | 50 | 14 | | | 56 | | 70 | 50 | 45 | 60 | 60 | | 60 |
| Massachusetts | | | 44 | | 56 | 50 | 70 | | 45 | 56 | 55 | | 60 |
| Michigan | | 14 | | | 56 | | 56 | | 45 | | 58 | | 60 |
| Minnesota | 50 | 14 | | 52 | 56 | | | 57 | 45 | 50 | 55 | 50 | 60 |
| Mississippi | | | | | 56 | | 50 | 42 | 45 | | 55 | | 60 |
| Missouri | | 14 | | 50 | 56 | | 50 | 42 | 45 | 45 | 42 | | 60 |
| Montana | | | | | 56 | | 50 | | 45 | | 50 | | 60 |
| Nebraska | 50 | 14 | | 60 | 56 | | 80 | 50 | 45 | 56 | 55 | 50 | 60 |
| Nevada | | | | | 56 | | 80 | 50 | 45 | 56 | 56 | | 60 |
| New Hampshire | | | | | 56 | 50 | 70 | | 45 | 56 | 55 | | 60 |
| New Jersey | | | | | 56 | | | | 45 | | | | 60 |
| New Mexico | 50 | | | 50 | 56 | | | 50 | 45 | 50 | 56 | | 60 |
| New York | | | 45 | | 56 | 50 | 70 | | 45 | | | | 60 |
| North Carolina | | 14 | 44 | | 56 | | 50 | 50 | 45 | 56 | 50 | 50 | 60 |
| North Dakota | | | | | 56 | | 80 | | 45 | | 60 | | 60 |
| Ohio | | | | | 56 | | | 50 | 45 | 56 | 60 | 50 | 60 |
| Oklahoma | 50 | 14 | | 50 | 56 | | 80 | 50 | 45 | 45 | 42 | | 60 |
| Oregon | | | | | 56 | | | | | | | | 60 |
| Pennsylvania | 50 | 14 | 45 | 60 | 56 | 50 | 85 | 50 | 45 | 60 | 60 | 50 | 60 |
| Rhode Island | | | | | 56 | 50 | 70 | | 45 | 56 | 60 | | 60 |
| South Carolina | | 14 | | | 56 | | 50 | 50 | 45 | 56 | 50 | 50 | 60 |
| South Dakota | 50 | 14 | | 50 | 56 | | 80 | 50 | 45 | 50 | 55 | 50 | 60 |
| Tennessee | | 14 | | | 56 | | 50 | 50 | 45 | 56 | 50 | 50 | 60 |
| Texas | | | | | 56 | | 50 | | 45 | 55 | 55 | | 60 |
| Vermont | | 14 | | | 56 | | 70 | | 45 | 56 | 60 | | 60 |
| Virginia | | 40 | | | 56 | | 50 | | 45 | 60 | 55 | | 60 |
| Washington | | | | | 56 | | | | | | | | 60 |
| West Virgina | 50 | 14 | | | 56 | | 70 | 57 | 45 | 56 | | | 60 |
| Wisconsin | 50 | 14 | 45 | 56 | 56 | 50 | 70 | | 45 | 56 | 42 | | 60 |
| Federal Statutes | | | | | 56 | | | | | | | | 60 |

## TABLES FOR READY REFERENCE

### Distance in Miles of the Different State Capitals from Washington, the National Capital.

According to a compilation of the Postmaster-General.

| | | | |
|---|---|---|---|
| Albany, N. Y. | 373 | Jackson, Miss. | 1,011 |
| Annapolis, Md. | 42 | Jefferson City, Mo. | 1,019 |
| Atlanta, Ga. | 649 | Lansing, Mich. | 661 |
| Augusta, Me. | 615 | Lincoln, Neb. | 1,285 |
| Austin, Tex. | 1,556 | Little Rock, Ark. | 1,064 |
| Baton Rouge, La. | 1,179 | Madison, Wis. | 910 |
| Bismarck, N. D. | 1,610 | Montgomery, Ala. | 824 |
| Boise City, Idaho | 2,600 | Montpelier, Vt. | 555 |
| Boston, Mass. | 444 | Nashville, Tenn. | 770 |
| Carson City, Nev. | 2,898 | Providence, R. I. | 425 |
| Charleston, W. Va. | 386 | Olympia, Wash. | 3,110 |
| Cheyenne, Wyo. | 1,763 | Phoenix, Ariz. | 2,472 |
| Columbia, S. C. | 490 | Pierre, S. D. | 1,554 |
| Columbus, O. | 487 | Raleigh, N. C. | 299 |
| Concord, N. H. | 491 | Richmond, Va. | 116 |
| Denver, Colo. | 1,748 | Sacramento, Cal. | 3,022 |
| Des Moines, Ia. | 1,113 | St. Paul, Minn. | 1,172 |
| Frankfort, Ky. | 604 | Salem, Ore. | 3,104 |
| Guthrie, Okla. | 1,466 | Santa Fe, N. M. | 2,006 |
| Harrisburg, Pa. | 125 | Springfield, Ill. | 835 |
| Hartford, Conn. | 341 | Tallahassee, Fla. | 872 |
| Helena, Mont. | 2,295 | Topeka, Kans. | 1,204 |
| Indianapolis, Ind. | 643 | Trenton, N. J. | 169 |

### Table of Specific Gravity

Compared with water.

| | | | |
|---|---|---|---|
| Water, distilled | 100 | Iron, cast | 721 |
| Water, sea | 103 | Ivory | 183 |
| Alcohol | 84 | Lead | 1,135 |
| Aluminum | 256 | Mahogany | 106 |
| Ash | 84 | Maple | 75 |
| Beer | 102 | Milk, Cow's | 103 |
| Brass | 840 | Milk, Goat's | 104 |
| Butter | 94 | Oak | 117 |
| Cedar | 61 | Opium | 134 |
| Chalk | 279 | Platina | 2,150 |
| Cider | 102 | Porcelain | 226 |
| Coal | 130 | Silver | 1,047 |
| Copper | 895 | Steel | 783 |
| Cork | 24 | Sulphur | 203 |
| Diamond | 353 | Turpentine | 99 |
| Ebony | 133 | Tin | 729 |
| Fir | 55 | Walnut | 67 |
| Glass | 289 | Wine | 100 |
| Gold | 1,926 | Zinc | 691 |
| Ice | 92 | Marble | 270 |

### Roman and Arabic Numerals

| | | | | | |
|---|---|---|---|---|---|
| I | 1 | VI | 6 | L | 50 |
| II | 2 | VII | 7 | C | 100 |
| III | 3 | VIII | 8 | D | 500 |
| IV | 4 | IX | 9 | M | 1000 |
| V | 5 | X | 10 | | |

MCMX ..... 1910 MCMXXVI ..... 1926

## POSTAL DISTANCES AND TIME FROM NEW YORK

As indicated by the Official Postal Guide, showing the distance by shortest routes and time in transit by fastest trains from New York City.

| Cities in United States | Miles | Hours | Cities in United States | Miles | Hours |
|---|---|---|---|---|---|
| Albany, N. Y. | 142 | 4½ | Kansas City, Mo. | 1,302 | 38½ |
| Atlanta, Ga. | 882 | 24½ | Louisville, Ky. | 854 | 34 |
| Baltimore, Md. | 188 | 6 | Memphis, Tenn. | 1,163 | 40 |
| Bismarck, N. Dak. | 1,778 | 60½ | Milwaukee, Wisc. | 985 | 29½ |
| Boise City, Idaho | 2,736 | 92½ | Montgomery, Ala. | 1,057 | 30½ |
| Boston, Mass. | 217 | 7 | Montpelier, Vt. | 327 | 10½ |
| Buffalo, N Y. | 410 | 11½ | New Orleans, La. | 1,344 | 40 |
| Cape May, N. J. | 172 | 6 | Omaha, Neb. | 1,383 | 43 |
| Carson City, Nev. | 3,036 | 109 | Philadelphia, Pa. | 90 | 3 |
| Charleston, S. C. | 804 | 21½ | Pittsburg, Pa. | 431 | 13 |
| Chattanooga, Tenn. | 853 | 32 | Portland, Me. | 325 | 12 |
| Cheyenne, Wyo. | 1,899 | 56 | Portland, Ore. | 3,181 | 114½ |
| Chicago, Ill. | 900 | 24 | Prescott, Ariz. | 2,724 | 94 |
| Cincinnati, O. | 744 | 23½ | Providence, R. I. | 189 | 6 |
| Cleveland, O. | 568 | 19½ | Richmond, Va. | 344 | 11½ |
| Columbus, O. | 624 | 20 | St. Louis, Mo. | 1,048 | 29 |
| Concord, N. H. | 292 | 9½ | St. Paul, Minn. | 1,300 | 37 |
| Deadwood, S. Dak. | 1,957 | 65½ | Salt Lake City, Utah | 2,452 | 71½ |
| Denver, Col. | 1,931 | 60½ | San Francisco, Cal. | 3,250 | 124½ |
| Des Moines, Ia. | 1,257 | 37½ | Savannah, Ga. | 905 | 26 |
| Detroit, Mich. | 743 | 25 | Tacoma, Wash. | 3,209 | 127 |
| Galveston, Tex. | 1,789 | 56½ | Topeka, Kan. | 1,370 | 40 |
| Harrisburg, Pa. | 182 | 6 | Trenton, N. J. | 57 | 2 |
| Hartford, Ct. | 112 | 4 | Vicksburg, Miss. | 1,288 | 50 |
| Helena, Mont. | 2,423 | 89 | Washington, D. C. | 228 | 6½ |
| Hot Springs, Ark. | 1,367 | 55 | Wheeling, W. Va. | 496 | 16½ |
| Indianapolis, Ind. | 808 | 23 | Wilmington, Del. | 117 | 5 |
| Jacksonville, Fla. | 1,077 | 31½ | Wilmington, N. C. | 593 | 20 |

## Distances From New York and the Time it Takes Letters to Reach Their Destination in Different Parts of the World.

| To— | Miles. | Days. |
|---|---|---|
| Adelaide, via San Francisco | 12,845 | 34 |
| Alexandria, via London | 6,150 | 13 |
| Amsterdam, via London | 3,985 | 8 |
| Athens, via London | 5,655 | 12 |
| Bahia, Brazil | 5,870 | 21 |
| Berlin, via London | 4,385 | 9 |
| Bombay, via London | 9,765 | 24 |
| Buenos Ayres | 8,045 | 26 |
| Calcutta, via London | 11,120 | 26 |
| Cape Town, via London | 11,245 | 27 |
| Constantinople, via London | 5,810 | 11 |
| Florence, via London | 4,800 | 10 |
| Glasgow | 3,375 | 8 |
| Greytown, via New Orleans | 2,810 | 7 |
| Halifax, N. S. | 645 | 2 |
| Havana, Cuba | 1,400 | 3 |
| Hong Kong, China, via San Francisco | 10,590 | 25 |
| Honolulu, Hawaiian Islands, via San Francisco | 5,645 | 12 |
| Liverpool, England | 3,540 | 7 |
| London, via Queenstown | 3,740 | 7 |
| Madrid, via London | 4,925 | 9 |
| Melbourne, Australia, via San Francisco | 12,265 | 26 |
| Mexico City by railroad | 3,750 | 5 |
| Panama | 2,355 | 6 |
| Paris | 4,020 | 8 |
| Rio de Janeiro | 6,730 | 23 |
| Rome, via London | 5,030 | 9 |
| Petrograd, via London | 5,370 | 9 |
| Shanghai, via San Francisco | 9,920 | 25 |
| Stockholm, via London | 4,975 | 9 |
| Sydney, via San Francisco | 11,570 | 21 |
| Valparaiso, via Panama | 5,910 | 37 |
| Vienna, via London | 4,740 | 9 |
| Yokohama, via San Francisco | 8,725 | 20 |

## Railway Signals.

One whistle signifies "down brakes."

Two whistles signify "off brakes."

Three whistles signify "back up."

Continued whistles signify "danger."

Rapid short whistles "a cattle alarm."

A sweeping parting of the hands on a level with the eyes signifies "go ahead."

Downward motion of the hands with extended arms signifies "stop."

Beckoning motion of one hand signifies "back."

Red flag waved up the track signifies "danger."

Red flag stuck up by the roadside signifies "danger ahead."

Red flag carried on a locomotive signifies "an engine following."

Red flag hoisted at a station is a signal "to stop."

Lantern at night raised and lowered vertically is a signal "to start."

Lantern swung at right angles across the track means "stop."

Lanterns swung in a circle signify "back the train."

## Difference of Time Between Washington and Other Principal Cities of the World and Longest Day at Principal Places.

| | | | | Longest Day. Hr. | Min. |
|---|---|---|---|---|---|
| 12.00 | o'clock | noon at | Washington. | St. Petersburg | 18 38 |
| 12.12 | " | P.M. | New York. | Stockholm | 18 35 |
| 12.24 | " | " | Boston. | Cape Horn | 17 34 |
| 12.27 | " | " | Portland. | Edinburgh | 17 32 |
| 1.37 | " | " | St. John(N. F) | Copenhagen | 17 20 |
| 4.31 | " | " | Lisbon. | Dublin | 16 52 |
| 4.43 | " | " | Dublin. | Berlin | 16 40 |
| 4.55 | " | " | Edinburgh. | London | 16 34 |
| 5.07 | " | " | London. | Paris | 16 05 |
| 5.17 | " | " | Paris. | Victoria, B. C. | 16 00 |
| 5.58 | " | " | Rome. | Vienna | 15 56 |
| 6.02 | " | " | Berlin. | Albany | 15 20 |
| 6.14 | " | " | Vienna. | Boston | 15 14 |
| 7.04 | " | " | Constantinople. | Chicago | 15 08 |
| 11.01 | " | " | Calcutta. | Ogden | 15 05 |
| 12.54 | " | A. M. | Pekin. | Constantinople | 15 04 |
| 2.48 | " | " | Melbourne. | Naples | 15 00 |
| 4.51 | " | " | Auckland. | Pekin | 14 58 |
| 8.58 | " | " | San Francisco. | Philadelphia | 14 56 |
| 9.40 | " | " | Salt Lake. | Washington | 14 52 |
| 11.08 | " | " | New Orleans. | Cape Town | 14 20 |
| 11.18 | " | " | Chicago. | Calcutta | 13 24 |
| 11.52 | " | " | Buffalo. | Panama | 12 34 |
| 12.00 | " | noon | Lima (Peru). | Quito | 12 00 |

The above is actual time, not standard time.

## Weight per Cubic Foot of Various Coals

*Anthracite*
- Egg ..... 56.10
- Range ..... 56.43
- Chestnut ..... 57.47
- Pea ..... 57.54
- Buckwheat ..... 58.42
- Screenings ..... 60.56

*Cannel*
- ..... 49.60

*Coke*
- Egg ..... 31.75
- Nut ..... 33.53
- Pea ..... 33.57

*Pocahontas*
- Mine Run ..... 57.69
- Lump ..... 52.99
- Egg ..... 53.98
- Nut ..... 53.08

*Smithing*
- ..... 53.46

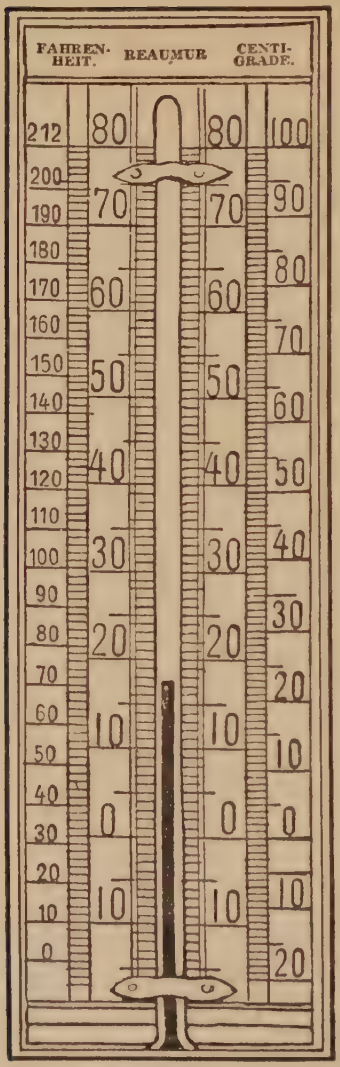
*Southern Illinois Soft Coal*
- No. 1 Nut ..... 48.27
- No. 2 Nut ..... 47.64
- Egg ..... 47.55
- Lump ..... 48.58
- Mine Run ..... 52.58
- Screenings ..... 50.97
- No. 5 Washed ..... 48.02

*Virginia Splint*
- ..... 46.64

The above table gives the weight per cubic foot for different grades of coal.

Example: How many tons of Cannel coal can be stored in a bin 6'x10'x7'?

Solution: 6'x10'x7' = 420 cubic feet. One cubic foot of Cannel coal weighs 49.6 lbs. Thus 420 x49.6 = 20,832 lbs., = 10.416 tons. Ans.




## Thermometers Compared.

There are three kinds of thermometers in general use thruout the world, the Centigrade, the Reaumer, and the Fahrenheit. The freezing and boiling points on their scales compare as follows:

| | Freezing Pt | Boiling Pt |
|---|---|---|
| Centigrade | Zero | 100 degrees |
| Reaumer | Zero | 80 " |
| Fahrenheit | 32 degrees | 212 " |

The accompanying illustration shows at a glance how the scales compare.

## Formulae For Equivalents.

To find the same temperature on different scales the following rules may be used:

Centigrade to Reaumer—multiply by 4/5ths.

Centigrade to Fahrenheit—multiply by 9/5ths and add 32.

Reaumer to Centigrade—multiply by 5/4ths.

Reaumer to Fahrenheit—multiply by 9/4ths and add 32.

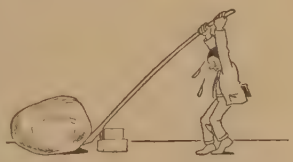
Fahrenheit to Centigrade—subtract 32 and multiply by 5/9ths.

Fahrenheit to Reaumer—subtract 32 and multiply by 4/9ths.

## The Mechanical Powers

There are six simple mechanical elements which overcome resistance. They are: 1, the Lever; 2, the Wheel and Axle; 3, the Pulley; 4, the Inclined Plane; 5, the Screw, and 6, the Wedge. In their operation the applied force is called the *power* and the resisting force is called the *weight*.

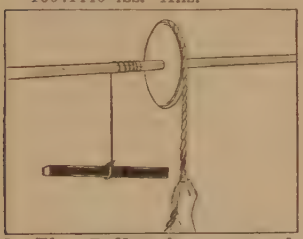
1. *The Lever* is a long bar turning on a prop called the *fulcrum*. The *arms* of the lever are the parts on each side of the fulcrum.



RULE. The power applied to a lever is increased as many times as the power arm is longer than the weight arm.

EXAMPLE: What weight can a man weighing 160 lbs. raise with a lever 10 feet long, the fulcrum being 9 feet from the power and 1 foot from the weight?

SOLUTION: $9 \div 1 = 9$; $9 \times 160 = 1440$ lbs., or by proportion $1:9 = 160:1440$ lbs. Ans.



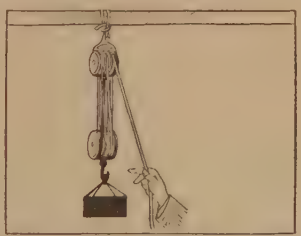
2. *The Wheel and Axle* is a modification of the lever and acts on the same principle.

RULE: The power is increased as many times as the diameter of the wheel is greater than the diameter of the axle.

EXAMPLE: How much weight can be raised by a wheel 60 inches in diameter and an axle 3 inches in diameter by applying a pull of 50 lbs.?

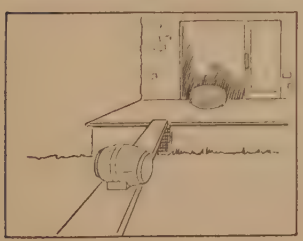
SOLUTION: $60 \div 3 = 20$; $20 \times 50 = 1000$ lbs. or by proportion $3:60 = 50:1000$ lbs. Ans.

3. *The Pulley* is a grooved wheel turning on a pin in a frame called a *block*. A single pulley affords no mechanical advantage but in a system of pulleys called the *Block and Tackle* the power applied to the hauling line is increased as many times as there are pulleys in both blocks.



EXAMPLE: Find the number of pounds that can be raised by applying a power of 50 lbs. to a block and tackle having three pulleys in each block.

SOLUTION: $50 \times 6 = 300$ lbs. Ans.



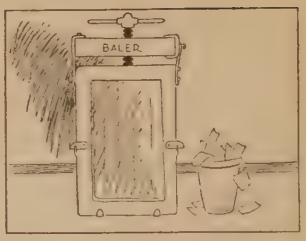
4. *The Inclined Plane* is, as its name indicates, an even surface sloping at an angle between the horizontal and the vertical. It is used for moving heavy merchandise from one level to another.

RULE: The power applied is increased as many times as the length of the inclined plane is greater than the elevation.

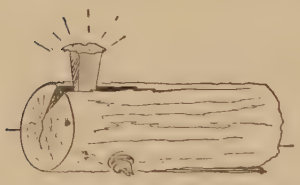
EXAMPLE: If it requires all of a man's strength to lift a barrel weighing 100 lbs. into a wagon 3 feet from the ground, how heavy a barrel could he roll into the wagon by means of a 9-foot plank?

SOLUTION: $9 \div 3 = 3$; $100 \times 3 = 300$.

5. *The Screw* is a modification of the inclined plane. The distance between the threads is called the *pitch* of the screw. The power is applied to a wheel or lever attached to the screw. Thus to raise the weight the distance between the threads, the wheel must make one complete revolution, which is 6 2/7 times the length of the lever.




RULE: The power applied is increased as many times as 6 2/7 times the length of the lever is greater than the pitch of the screw.
EXAMPLE: What pressure can be exerted by a screw with ½-inch pitch by applying a power of 50 lbs. to the end of a 14-inch lever? SOLUTION: $14 \times 6\ 2/7 \times 50 \div \frac{1}{2} = 8800$ lbs. Ans.



6. *The Wedge* is also an adaptation of the inclined plane. In fact, it may be considered as a double inclined plane. It is used for splitting wood or stone but the friction encountered is so great that it is almost impossible to compute its mechanical advantage.
RULE: Apart from friction the power applied is increased as many times as the length of one of its slant sides is greater than ½ the thickness of its head.
EXAMPLE: Thus a wedge, one of whose slant sides is 10 inches long and head 2 inches thick would exert a force ($10 \div \frac{1}{2}$ of 2) or 10 times greater than the power applied without considering the friction involved.

### To Extract the Square Root

RULES. 1. Beginning with units, point off the given number into periods of two figures each (the last period may have but one figure). 2. Find the greatest square in the left-hand period and place its root on the right as in division. 3. Subtract the square from the left-hand period, and to the remainder, bring down the next period for a dividend. 4. Take twice the root figure for a trial divisor and find how often it is contained in the dividend excepting the right-hand figure; write the quotient as the second root figure; and also annex it to the trial divisor. 5. Multiply the completed divisor by the last root figure, subtract the product from the dividend, and bring down another period for a dividend. 6. Add the last root figure to the complete divisor for the next trial divisor, and proceed as before until the last root of each period is found. 7. If the trial divisor is not contained in the dividend, write a zero in the root and on the right of the trial divisor, and bring down another period. 8. If the number is not a square, the root may be extracted to any number of decimal places by adding periods or ciphers to the remainder. 9. In pointing out decimals begin at the tenths place. 10. To extract the square root of a common fraction reduce it to a decimal.

EXAMPLE: Find the square root of 5317636.
There being four periods, the root will consist of 4 figures. The greatest square of the first period is 4 and its root is 2. The first dividend is 131 and the first complete divisor 43. The second trial divisor (46) not going into 27 (6) write a zero in the root and in the trial divisor (46), then bring down the next period; and the complete divisor is contained 6 times.

```
      . . . .
      5317636(2306
                  Sq. Root
      4             Ans.
43 ) 131
  3  129
4606    27636
        27636
```

### To Extract the Cube Root

RULES. 1. Separate the numbers into periods of three figures each by placing a lot over units, thousands, etc. (The left-hand period may have but one or two figures.) Find the greatest cube in the left-hand period and place its root on the right as in division. Subtract the cube from its period and bring down the next period as a dividend. 2. To three times the square of the root figure add two ciphers for first trial divisor. In a separate column, "A," write three times the root figure. Find the second root figure by trial and write it in the root, also annex it to the number in "A." 3. Then multiply the number in column "A" by the second root figure, and add the product to the trial divisor, thus forming the complete divisor. 4. Multiply this divisor by the second root figure, subtract the product from the dividend and to the remainder bring down another period for the new dividend. 5. To find the 2nd trial divisor add together the complete divisor, the number just above it and the square of the last root figure and annex two ciphers, and thus proceed as before. 6. When the trial divisor is not contained in its dividend, write a zero in the root, annex two zeros to the trial divisor and one zero to the last number in "A" and then bring down another period to the dividend.

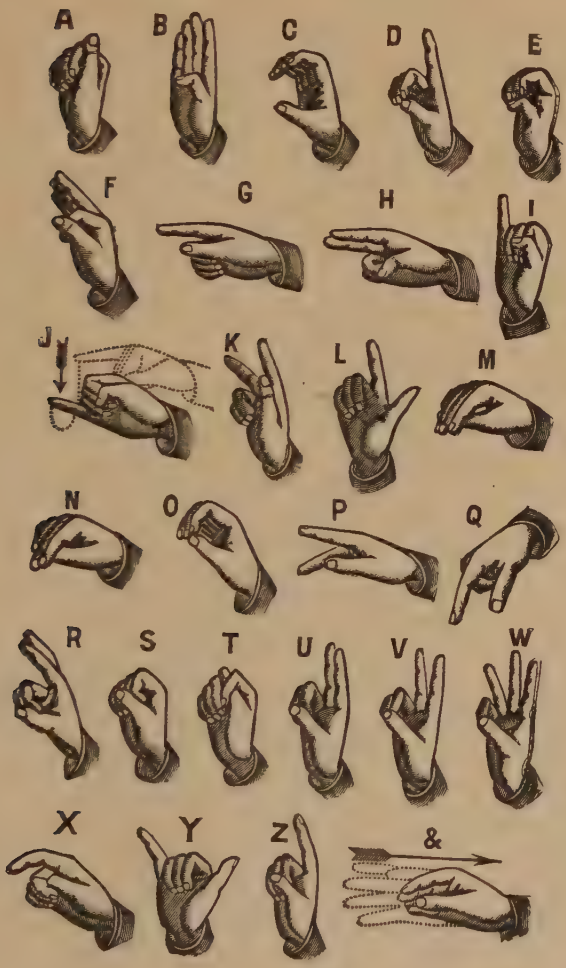
EXAMPLE: Find the cube root of 33076161. There are three periods, therefore 3 figures in the root. The greatest cube under 33 is .27 whose root is 3, which we write as in division, then subtract the cube from its period and to the remainder bring down the other period as a dividend. We next take 3 times the square of the root figure (3x3x3 = 27) with the two ciphers annexed for a trial divisor, and place 3 times the root (3x3 = 9) under Column A. The trial divisor 2700 is contained in the dividend 6076 twice. Thus we write 2 in the root, annex it to the figure 9 in Column A, and then multiply the resulting 92 by 2, the last root figure, and add the complete product 184 to the trial divisor for the complete divisor, 2884, which is contained in the dividend twice, leaving a new dividend 308161. Now proceeding as before, 3 times the first two root numbers in Column A is 96. Then the new trial divisor is secured by adding together the first complete divisor (2884), the number above it (184) and the square of the last root number (2x2 = 4) and annexing two ciphers, 307200. This is contained in the dividend once so we write 1 as the third root figure, and annex it to the number in column A and proceed as before. Multiplying the complete divisor by one gives a product equal to the dividend, thus showing that 321 is the cube root.

| | "A" | | | |
|---|---|---|---|---|
| | | . . . | | |
| | 2700 ) | 33076161 ( | 321 Ans. | |
| 92×2 = | 184 | 27 | | |
| | 2884 | 6076 | | 1st Div. |
| | 4 | 5768 | | |
| | 307200 | 308161 | | 2nd Div. |
| 961×1 = | 961 | | | |
| | 308161 | | | |
| | | 308161 | | |

# Domestic Postage Rates at a Glance

| | First Class | Air Mail | Second Class | Third Class | Fourth Class | Business Reply Cards and Envelopes |
|---|---|---|---|---|---|---|
| **Classification of Mailing Matter** | Letters — written and sealed matter; carbon copies; postal cards; private mailing cards. | Mailable matter of any class not liable to freezing. Must be plainly marked "VIA AIR MAIL." Fifty pounds maximum weight. | Newspapers, magazines, periodicals, etc., entered at a post office as second class mail. | **Printed matter (unsealed) not in the nature of personal correspondence; corrected proof sheets and accompanying manuscript; merchandise and other mailable matter not included in 1st and 2nd class mail, weights not to exceed eight ounces** | Same as 3rd class where packages weigh over eight ounces. | Business return post cards and letters in business reply envelopes. |
| **Rates** | Letters — 2 cents for each ounce or fraction of an ounce.<br>**Postal cards — 1 cent each in writing or in print** | **5 cents for the first ounce and ten cents for each additional ounce.** | Rate per pound<br>Zone or fraction<br>1–2 ..... 1½ cents<br>3 ..... 2 "<br>4 ..... 3 "<br>5 ..... 4 "<br>6 ..... 5 "<br>7 ..... 6 "<br>8 ..... 7 "<br>Where pound consists of more than 32 pieces and less than 48, double the above rates; where pound consists of more than 48 pieces and less than 64, three times the above rate; over 64 pieces to the pound proportional rates apply for each 16 additional pieces.<br>When mailed by others than the publisher or news agent, the rate shall be 1 cent for each two ounces or fraction. | 1½ cents for each two ounces or fraction up to and including eight ounces, except that the rate on books, catalogs, seeds, cuttings, bulbs, etc., not over eight ounces in weight shall be 1 cent for each two ounces or fraction.<br>Separately addressed and identical pieces in quantities of not less than 20 pounds or not less than 200 pieces may be mailed without postage stamps or pre-cancelled stamps in bulk at a rate of 12 cents for each pound or fraction, except that in no case shall the rate be lower than one cent for each piece mailed in bulk. | Zone / Local† / Rate 1st pound / Additional pounds 1 cent*<br>1–2 — 7 cents — 1 "<br>3 — 8 " — 2 "<br>4 — 8 " — 4 "<br>5 — 9 " — 6 "<br>6 — 10 " — 8 "<br>7 — 12 " — 10 "<br>8 — 13 " — 12 "<br>*For each 2 pounds additional in local delivery; for each pound in zone delivery.<br>†When mailed on rural routes for local, 1st, 2nd and 3rd zones, 2 cents less; for 4th, **5th, 6th, 7th and 8th zones 1 cent less than regular rates** | Not more than 2 cents on each card and envelope, to be collected on delivery. (a)<br>(a) Under provisions the postmaster-general may establish. |
| **Special Delivery** | On matter not over two pounds — 10 cents.<br>More than two pounds and not over 10—15 cents.<br>Over ten pounds—20 cents. | Same as First Class. | **On matter not over two pounds—15 cents<br>More than two and not over ten—25 cents<br>More than ten pounds—35 cents** | | **Special Handling**<br>On matter not over two pounds—10 cents.<br>Over two pounds but not over ten—15 cents.<br>Over 10 pounds — 20 cents. | |

## THE DEAF AND DUMB ALPHABET



# THE NEW MULTIPLICATION TABLE

THIS TABLE shows that the large figures in front of each double row are intended to multiply the small head figures in said row; for instance the large 9 is followed by 2, 3, 4, 5, 6, 7, 8, 9, beneath which stands the increase of each, multiplied by 9, namely, 9 times 2 are eighteen 9 times 3 are 27, 9 times 4 are 36, etc., 9 times 9 are 81, as will be seen at the end of the row; and in the last row, 25 times 2 are 50, etc., and at the end 25 times 25 are 625.

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 2 | 4 | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 3 | 6 | 9 | | | | | | | | | | | | | | | | | | | | | |
| 4 | 4 | 8 | 12 | 16 | | | | | | | | | | | | | | | | | | | | |
| 5 | 5 | 10 | 15 | 20 | 25 | | | | | | | | | | | | | | | | | | | |
| 6 | 6 | 12 | 18 | 24 | 30 | 36 | | | | | | | | | | | | | | | | | | |
| 7 | 7 | 14 | 21 | 28 | 35 | 42 | 49 | | | | | | | | | | | | | | | | | |
| 8 | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | | | | | | | | | | | | | | | | |
| 9 | 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 | | | | | | | | | | | | | | | |
| 10 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | | | | | | | | | | | | | | |
| 11 | 11 | 22 | 33 | 44 | 55 | 66 | 77 | 88 | 99 | 110 | 121 | | | | | | | | | | | | | |
| 12 | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | | | | | | | | | | | | |
| 13 | 13 | 26 | 39 | 52 | 65 | 78 | 91 | 104 | 117 | 130 | 143 | 156 | 169 | | | | | | | | | | | |
| 14 | 14 | 28 | 42 | 56 | 70 | 84 | 98 | 112 | 126 | 140 | 154 | 168 | 182 | 196 | | | | | | | | | | |
| 15 | 15 | 30 | 45 | 60 | 75 | 90 | 105 | 120 | 135 | 150 | 165 | 180 | 195 | 210 | 225 | | | | | | | | | |
| 16 | 16 | 32 | 48 | 64 | 80 | 96 | 112 | 128 | 144 | 160 | 176 | 192 | 208 | 224 | 240 | 256 | | | | | | | | |
| 17 | 17 | 34 | 51 | 68 | 85 | 102 | 119 | 136 | 153 | 170 | 187 | 204 | 221 | 238 | 255 | 272 | 289 | | | | | | | |
| 18 | 18 | 36 | 54 | 72 | 90 | 108 | 126 | 144 | 162 | 180 | 198 | 216 | 234 | 252 | 270 | 288 | 306 | 324 | | | | | | |
| 19 | 19 | 38 | 57 | 76 | 95 | 114 | 133 | 152 | 171 | 190 | 209 | 228 | 247 | 266 | 285 | 304 | 323 | 342 | 361 | | | | | |
| 20 | 20 | 40 | 60 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 220 | 240 | 260 | 280 | 300 | 320 | 340 | 360 | 380 | 400 | | | | |
| 21 | 21 | 42 | 63 | 84 | 105 | 126 | 147 | 168 | 189 | 210 | 231 | 252 | 273 | 294 | 315 | 336 | 357 | 378 | 399 | 420 | 441 | | | |
| 22 | 22 | 44 | 66 | 88 | 110 | 132 | 154 | 176 | 198 | 220 | 242 | 264 | 286 | 308 | 330 | 352 | 374 | 396 | 418 | 440 | 462 | 484 | | |
| 23 | 23 | 46 | 69 | 92 | 115 | 138 | 161 | 184 | 207 | 230 | 253 | 276 | 299 | 322 | 345 | 368 | 391 | 414 | 437 | 460 | 483 | 506 | 529 | |
| 24 | 24 | 48 | 72 | 96 | 120 | 144 | 168 | 192 | 216 | 240 | 264 | 288 | 312 | 336 | 360 | 384 | 408 | 432 | 456 | 480 | 504 | 528 | 552 | 576 |
| 25 | 25 | 50 | 75 | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 325 | 350 | 375 | 400 | 425 | 450 | 475 | 500 | 525 | 550 | 575 | 600 | 625 |

# THE PRINCIPAL CITIES OF THE UNITED STATES WITH A POPULATION OF 10,000 OR MORE ACCORDING TO THE CENSUS OF 1920. *

| Cities. | 1920. |
|---|---|
| **ALABAMA.** | |
| Anniston | 17,734 |
| Bessemer | 18,674 |
| Birmingham | 178,270 |
| Dothan | 10,034 |
| Florence | 10,529 |
| Gadsden | 14,737 |
| Mobile | 60,151 |
| Montgomery | 43,464 |
| Selma | 15,589 |
| Tuscaloosa | 11,996 |
| **ARIZONA.** | |
| Phoenix | 29,053 |
| Tucson | 20,292 |
| **ARKANSAS.** | |
| Fort Smith | 28,811 |
| Hot Springs | 11,695 |
| Little Rock | 64,997 |
| North Little Rock | 14,048 |
| Pine Bluff | 19,280 |
| **CALIFORNIA.** | |
| Alameda | 28,806 |
| Bakersfield | 18,638 |
| Berkeley | 55,886 |
| Eureka | 12,923 |
| Fresno | 44,616 |
| Glendale | 13,536 |
| Long Beach | 55,593 |
| Los Angeles | 576,673 |
| Oakland | 216,361 |
| Pasadena | 45,354 |
| Pomona | 13,505 |
| Richmond | 16,843 |
| Riverside | 19,341 |
| Sacramento | 65,857 |
| San Bernardino | 18,721 |
| San Diego | 74,683 |
| San Francisco | 508,410 |
| San Jose | 39,604 |
| Santa Ana | 15,485 |
| Santa Barbara | 19,441 |
| Santa Cruz | 10,917 |
| Santa Monica | 15,252 |
| Stockton | 40,296 |
| Vallejo | 21,107 |
| Venice | 10,385 |
| **COLORADO.** | |
| Boulder | 10,989 |
| Colorado Springs | 30,105 |
| Denver | 256,369 |
| Greeley | 10,883 |
| Pueblo | 42,908 |
| Trinidad | 10,906 |

| Cities. | 1920. |
|---|---|
| **CONNECTICUT.** | |
| Ansonia | 17,643 |
| Bridgeport | 143,538 |
| Bristol | 20,620 |
| Danbury (city) | 18,943 |
| Danbury (town) | 22,325 |
| Derby | 11,238 |
| East Hartford | 11,648 |
| Enfield | 11,719 |
| Fairfield | 11,475 |
| Greenwich | 22,123 |
| Hartford | 138,036 |
| Manchester | 18,370 |
| Meriden (city) | 29,842 |
| Meriden (town & city) | 34,739 |
| Middletown (city) | 13,638 |
| Middletown (town) | 22,129 |
| Milford | 10,193 |
| Naugatuck (borough) | 15,051 |
| New Britain | 59,316 |
| New Haven | 162,519 |
| New London | 25,688 |
| Norwalk | 27,700 |
| Norwich (city) | 22,304 |
| Norwich (town) | 29,685 |
| Orange (town) | 16,614 |
| Stamford (city & town) | 40,057 |
| Stamford (city) | 35,086 |
| Stonington | 10,236 |
| Stratford | 12,347 |
| Torrington (borough) | 20,623 |
| Torrington (town) | 22,055 |
| Wallingford | 12,010 |
| Waterbury | 91,410 |
| Willimantic | 12,330 |
| Windham | 13,801 |
| **DELAWARE.** | |
| Wilmington | 110,168 |
| **DISTRICT OF COLUMBIA.** | |
| Washington | 437,571 |
| **FLORIDA.** | |
| Jacksonville | 91,558 |
| Key West | 18,749 |
| Miami | 29,549 |
| Pensacola | 31,035 |
| St. Petersburg | 14,237 |
| Tampa | 51,252 |
| **GEORGIA.** | |
| Albany | 11,555 |
| Athens | 16,748 |
| Atlanta | 200,616 |
| Augusta | 52,548 |

*NOTE:—The United States takes the official census once every ten years, that of 1920 being the latest.

| Cities. | 1920. |
|---|---|
| Brunswick | 14,413 |
| Columbus | 31,125 |
| La Grange | 17,038 |
| Macon | 52,995 |
| Rome | 13,252 |
| Savannah | 83,252 |
| Valdosta | 10,783 |
| Waycross | 18,068 |
| **IDAHO.** | |
| Boise | 21,393 |
| Pocatello | 15,001 |
| **ILLINOS.** | |
| Alton | 24,682 |
| Aurora | 36,397 |
| Belleville | 24,823 |
| Berwyn | 14,150 |
| Bloomington | 28,725 |
| Blue Island | 11,424 |
| Cairo | 15,203 |
| Canton | 10,928 |
| Centralia | 12,491 |
| Champaign | 15,873 |
| Chicago | 2,701,705 |
| Chicago Heights | 19,653 |
| Cicero | 44,995 |
| Danville | 33,750 |
| Decatur | 43,818 |
| East St. Louis | 66,740 |
| Elgin | 27,454 |
| Evanston | 37,215 |
| Forest Park | 10,768 |
| Freeport | 19,669 |
| Galesburg | 23,834 |
| Granite City | 14,757 |
| Herrin | 10,986 |
| Jacksonville | 15,713 |
| Joliet | 38,406 |
| Kankakee | 16,753 |
| Kewanee | 16,026 |
| La Salle | 13,050 |
| Lincoln | 11,882 |
| Mattoon | 13,552 |
| Maywood | 12,072 |
| Moline | 30,709 |
| Murphysboro | 10,703 |
| Oak Park | 39,830 |
| Ottawa | 10,816 |
| Pekin | 12,086 |
| Peoria | 76,121 |
| Quincy | 35,978 |
| Rockford | 65,651 |
| Rock Island | 35,177 |
| Springfield | 59,183 |
| Streator | 14,779 |
| Urbana | 10,244 |
| Waukegan | 19,226 |
| **INDIANA.** | |
| Anderson | 29,767 |
| Bloomington | 11,595 |
| Clinton | 10,962 |
| Crawfordsville | 10,139 |
| East Chicago | 35,967 |
| Elkhart | 24,277 |
| Elwood | 10,790 |
| Evansville | 85,264 |
| Fort Wayne | 86,549 |
| Frankfort | 11,585 |
| Gary | 55,378 |
| Hammond | 36,004 |
| Huntington | 14,000 |
| Indianapolis | 314,194 |
| Jeffersonville | 10,098 |
| Kokomo | 30,067 |
| Lafayette | 22,486 |
| Laporte | 15,158 |
| Logansport | 21,626 |
| Marion | 23,747 |
| Michigan City | 19,457 |
| Mishawaka | 15,195 |
| Muncie | 36,524 |
| New Albany | 22,992 |
| New Castle | 14,458 |
| Peru | 12,410 |
| Richmond | 26,765 |
| South Bend | 70 983 |
| Terre Haute | 66,083 |
| Vincennes | 17,160 |
| Whiting | 10,145 |
| **IOWA.** | |
| Boone | 12,451 |
| Burlington | 24,057 |
| Cedar Rapids | 45,566 |
| Clinton | 24,151 |
| Council Bluffs | 36,162 |
| Davenport | 56,727 |
| Des Moines | 126,468 |
| Dubuque | 39,141 |
| Fort Dodge | 19,347 |
| Fort Madison | 12,066 |
| Iowa City | 11,267 |
| Keokuk | 14,423 |
| Marshalltown | 15,731 |
| Mason City | 20,065 |
| Muscatine | 16,068 |
| Ottumwa | 23,003 |
| Sioux City | 71,227 |
| Waterloo | 36,230 |
| **KANSAS.** | |
| Arkansas City | 11,253 |
| Atchison | 12,630 |
| Chanute | 10,286 |
| Coffeyville | 13,452 |
| Eldorado | 10,995 |
| Emporia | 11,273 |
| Fort Scott | 10,693 |
| Hutchinson | 23,298 |
| Independence | 11,920 |
| Kansas City | 101,177 |
| Lawrence | 12,456 |

| Cities. | 1920. |
|---|---|
| Leavenworth | 16,912 |
| Parsons | 16,028 |
| Pittsburg | 18,052 |
| Salina | 15,085 |
| Topeka | 50,022 |
| Wichita | 72,128 |
| **KENTUCKY.** | |
| Ashland | 14,729 |
| Covington | 57.121 |
| Henderson | 12,169 |
| Lexington | 41,534 |
| Louisville | 234.891 |
| Newport | 29,317 |
| Owensboro | 17,424 |
| Paducah | 24,735 |
| **LOUISIANA.** | |
| Alexandria | 17,510 |
| Baton Rouge | 21.782 |
| Lake Charles | 13.088 |
| Monroe | 12,675 |
| New Orleans | 387.219 |
| Shreveport | 43,874 |
| **MAINE.** | |
| Auburn | 16,985 |
| Augusta | 14.114 |
| Bangor | 25.978 |
| Bath | 14,731 |
| Biddeford | 18.008 |
| Lewiston | 31,791 |
| Portland | 69,272 |
| Sanford | 10,691 |
| Waterville | 13,351 |
| **MARYLAND.** | |
| Annapolis | 11,214 |
| Baltimore | 733,826 |
| Cumberland | 29,837 |
| Frederick | 11,066 |
| Hagerstown | 28,066 |
| **MASSACHUSETTS.** | |
| Adams | 12,967 |
| Amesbury | 10,036 |
| Arlington | 18,665 |
| Attleboro | 19,731 |
| Belmont | 10,749 |
| Beverly | 22.561 |
| Boston | 748,060 |
| Braintree | 10,580 |
| Brockton | 66.138 |
| Brookline | 37,748 |
| Cambridge | 109,694 |
| Chelsea | 43,184 |
| Chicopee | 36.214 |
| Clinton | 12,979 |
| Danvers | 11,108 |
| Dedham | 10,792 |
| Easthampton | 11.261 |
| Everett | 40,120 |
| Fall River | 120,485 |
| Fitchburg | 41,013 |
| Framingham | 17,033 |
| Gardner | 16,971 |
| Gloucester | 22,947 |
| Greenfield | 15,462 |
| Haverhill | 53,884 |
| Holyoke | 60,203 |
| Lawrence | 94,270 |
| Leominster | 19,744 |
| Lowell | 112.759 |
| Lynn | 99,148 |
| Malden | 49,103 |
| Marlborough | 15,028 |
| Medford | 39,038 |
| Melrose | 18,204 |
| Methuen | 15,189 |
| Milford | 13,471 |
| Natick | 10,907 |
| New Bedford | 121,217 |
| Newburyport | 15,618 |
| Newton | 46,054 |
| North Adams | 22.282 |
| Northhampton | 21,951 |
| Northbridge | 10,174 |
| Norwood | 12,627 |
| Peabody | 19,552 |
| Pittsfield | 41,751 |
| Plymouth | 13,045 |
| Quincy | 47,876 |
| Revere | 28,823 |
| Salem | 42,529 |
| Saugus | 10,874 |
| Somerville | 93 091 |
| Southbridge | 14,245 |
| Springfield | 129,563 |
| Taunton | 37,137 |
| Wakefield | 13,025 |
| Waltham | 30,915 |
| Watertown | 21,457 |
| Webster | 13,258 |
| West Springfield | 13,443 |
| Westfield | 18,604 |
| Weymouth | 15,057 |
| Winchester | 10,485 |
| Winthrop | 15.455 |
| Woburn | 16,574 |
| Worcester | 179,754 |
| **MICHIGAN.** | |
| Adrian | 11,878 |
| Alpena | 11,101 |
| Ann Arbor | 19,516 |
| Battle Creek | 36,164 |
| Bay City | 47,554 |
| Benton Harbor | 12,233 |
| Detroit | 993,789 |
| Escanaba | 13,103 |
| Flint | 91,599 |
| Grand Rapids | 137,634 |
| Hamtramck | 48,615 |
| Highland Park | 46,499 |

| Cities. | 1920. |
|---|---|
| Holland | 12,166 |
| Ironwood | 15,739 |
| Ishpeming | 10,500 |
| Jackson | 48,374 |
| Kalamazoo | 48,858 |
| Lansing | 57,327 |
| Marquette | 12,718 |
| Monroe | 11,573 |
| Muskegon | 36,570 |
| Owosso | 12,575 |
| Pontiac | 34,273 |
| Port Huron | 25,944 |
| Saginaw | 61,903 |
| Sault Ste. Marie | 12,096 |
| Traverse | 10,925 |
| Wyandotte | 13,851 |
| **MINNESOTA.** | |
| Austin | 10,118 |
| Duluth | 98,917 |
| Faribault | 11 089 |
| Hibbing | 15,089 |
| Mankato | 12,469 |
| Minneapolis | 380,582 |
| Rochester | 13,722 |
| St. Cloud | 15,873 |
| St. Paul | 234,595 |
| Virginia | 14,022 |
| Winona | 19,143 |
| **MISSISSIPPI.** | |
| Biloxi | 10,937 |
| Columbus | 10,501 |
| Greenville | 11 560 |
| Hattiesburg | 13,270 |
| Jackson | 22,817 |
| Laurel | 13,037 |
| Meridian | 23,399 |
| Natchez | 12,608 |
| Vicksburg | 17,931 |
| **MISSOURI.** | |
| Cape Girardeau | 10,252 |
| Carthage | 10,068 |
| Columbia | 10,379 |
| Hannibal | 18,950 |
| Independence | 11 686 |
| Jefferson City | 14,490 |
| Joplin | 29,855 |
| Kansas City | 324,410 |
| Moberly | 12,808 |
| Sedalia | 21,144 |
| Springfield | 39,631 |
| St. Joseph | 77,939 |
| St. Louis | 772,897 |
| **MONTANA.** | |
| Anaconda | 11,668 |
| Billings | 15,100 |
| Butte | 41,611 |
| Great Falls | 24,121 |
| Helena | 12,037 |
| Missoula | 12,668 |

| Cities. | 1920. |
|---|---|
| **NEBRASKA.** | |
| Grand Island | 13,960 |
| Hastings | 11,647 |
| Lincoln | 54,934 |
| North Platte | 10,466 |
| Omaha | 191,601 |
| **NEVADA.** | |
| Reno | 12,016 |
| **NEW HAMPSHIRE.** | |
| Berlin | 16,104 |
| Concord | 22,167 |
| Dover | 13,029 |
| Keene | 11,210 |
| Laconia | 10,897 |
| Manchester | 78,384 |
| Nashua | 28,379 |
| Portsmouth | 13,569 |
| **NEW JERSEY.** | |
| Asbury Park | 12,400 |
| Atlantic City | 50,682 |
| Bayonne | 76,754 |
| Belleville | 15,660 |
| Bloomfield | 22,019 |
| Bridgeton | 14,323 |
| Camden | 116,309 |
| Clifton | 26,470 |
| East Orange | 50,710 |
| Elizabeth | 95,682 |
| Englewood | 11,627 |
| Garfield | 19,381 |
| Gloucester | 12,162 |
| Hackensack | 17,667 |
| Harrison | 15,721 |
| Hoboken | 68,166 |
| Irvington | 25,480 |
| Jersey City | 297,864 |
| Kearny | 26,724 |
| Long Branch | 13,521 |
| Millville | 14,691 |
| Montclair | 28,810 |
| Morristown | 12,548 |
| Newark | 414,216 |
| New Brunswick | 32,779 |
| Orange | 33,268 |
| Passaic | 63,824 |
| Paterson | 135,866 |
| Perth Amboy | 41,707 |
| Phillipsburg | 16,923 |
| Plainfield | 27,700 |
| Rahway | 11,042 |
| Roosevelt | 11,047 |
| Summit | 10,174 |
| Trenton | 119,289 |
| Union | 20,651 |
| West Hoboken | 40,068 |
| West New York | 29,926 |
| West Orange | 15,573 |
| **NEW MEXICO.** | |
| Albuquerque | 15,157 |

| Cities. | 1920. |
|---|---|
| **NEW YORK.** | |
| Albany | 113,344 |
| Amsterdam | 33,524 |
| Auburn | 36,192 |
| Batavia | 13,541 |
| Beacon | 10,996 |
| Binghamton | 66,800 |
| Buffalo | 506,775 |
| Cohoes | 22,987 |
| Corning | 15,820 |
| Cortland | 13,294 |
| Dunkirk | 19,336 |
| Elmira | 45,305 |
| Fulton | 13,043 |
| Geneva | 14,648 |
| Glens Falls | 16,638 |
| Gloversville | 22,075 |
| Herkimer | 10,453 |
| Hornell | 15,025 |
| Hudson | 11,745 |
| Ilion | 10,169 |
| Ithaca | 17,004 |
| Jamestown | 38,917 |
| Johnstown | 10,908 |
| Kingston | 26,688 |
| Lackawanna | 17,918 |
| Little Falls | 13,029 |
| Lockport | 21,308 |
| Middletown | 18,420 |
| Mount Vernon | 42,726 |
| Newburgh | 30,366 |
| New Rochelle | 36,213 |
| New York City | 5,621,151 |
| Brooklyn | 2,022,262 |
| Bronx | 732,016 |
| Manhattan | 2,284,103 |
| Queens | 466,811 |
| Richmond | 115,959 |
| Niagara Falls | 50,760 |
| North Tonawanda | 15,482 |
| Ogdensburg | 14,609 |
| Olean | 20,506 |
| Oneida | 10,541 |
| Oneonta | 11,582 |
| Ossining | 10,739 |
| Oswego | 23,626 |
| Peekskill | 15,868 |
| Plattsburg | 10,909 |
| Port Chester | 16,573 |
| Port Jervis | 10,171 |
| Poughkeepsie | 35,000 |
| Rensselaer | 10,823 |
| Rochester | 295,750 |
| Rome | 26,341 |
| Saratoga Springs | 13,181 |
| Schenectady | 88,723 |
| Syracuse | 171,717 |
| Tonawanda | 10,068 |
| Troy | 72,013 |
| Utica | 94,156 |
| Watertown | 31,285 |
| Watervliet | 16,073 |
| White Plains | 21,031 |
| Yonkers | 100,226 |
| **NORTH CAROLINA.** | |
| Asheville | 28,504 |
| Charlotte | 46,338 |
| Durham | 21,719 |
| Gastonia | 12,871 |
| Goldsboro | 11,296 |
| Greensboro | 19,861 |
| High Point | 14,302 |
| Newbern | 12,198 |
| Raleigh | 24,418 |
| Rocky Mount | 12,742 |
| Salisbury | 13,884 |
| Wilmington | 33,372 |
| Wilson | 10,612 |
| Winston-Salem | 48,395 |
| **NORTH DAKOTA.** | |
| Fargo | 21,961 |
| Grand Forks | 14,010 |
| Minot | 10,476 |
| **OHIO.** | |
| Akron | 208,435 |
| Alliance | 21,603 |
| Ashtabula | 22,082 |
| Barberton | 18,811 |
| Bellaire | 15,061 |
| Bucyrus | 10,425 |
| Cambridge | 13,104 |
| Canton | 87,091 |
| Chillicothe | 15,831 |
| Cincinnati | 401,247 |
| Cleveland | 796,836 |
| Cleveland Heights | 15,236 |
| Columbus | 237,031 |
| Coshocton | 10,847 |
| Cuyahoga Falls | 10,200 |
| Dayton | 152,559 |
| East Cleveland | 27,292 |
| East Liverpool | 21,411 |
| East Youngstown | 11,237 |
| Elyria | 20,474 |
| Findlay | 17,021 |
| Fremont | 12,468 |
| Hamilton | 39,675 |
| Ironton | 14,007 |
| Kenmore | 12,683 |
| Lakewood | 41,732 |
| Lancaster | 14,706 |
| Lima | 41,306 |
| Lorain | 37,295 |
| Mansfield | 27,824 |
| Marietta | 15,140 |
| Marion | 27,891 |
| Martins Ferry | 11,634 |
| Massillon | 17,428 |
| Middletown | 23,594 |
| Newark | 26,718 |
| New Philadelphia | 10,718 |

| Cities. | 1920. |
|---|---|
| Niles | 13,080 |
| Norwood | 24,966 |
| Piqua | 15,044 |
| Portsmouth | 33,011 |
| Salem | 10,305 |
| Sandusky | 22,897 |
| Springfield | 60,840 |
| Steubenville | 28,508 |
| Tiffin | 14,375 |
| Toledo | 243,109 |
| Warren | 27,050 |
| Youngstown | 132,358 |
| Zanesville | 29,569 |
| **OKLAHOMA.** | |
| Ardmore | 14,181 |
| Bartlesville | 14,417 |
| Chickasha | 10,179 |
| Enid | 16,576 |
| Guthrie | 11,757 |
| McAlester | 12,095 |
| Muskogee | 30,277 |
| Oklahoma City | 91,258 |
| Okmulgee | 17,430 |
| Sapulpa | 11,634 |
| Shawnee | 15,348 |
| Tulsa | 72,075 |
| **OREGON.** | |
| Astoria | 14,027 |
| Eugene | 10,593 |
| Portland | 258,288 |
| Salem | 17,679 |
| **PENNSYLVANIA.** | |
| Allentown | 73,502 |
| Altoona | 60,331 |
| Ambridge | 12,730 |
| Beaver Falls | 12,802 |
| Berwick | 12,181 |
| Bethlehem | 50,358 |
| Braddock | 20,879 |
| Bradford | 15,525 |
| Bristol | 10,273 |
| Butler | 23,778 |
| Canonsburg | 10,632 |
| Carbondale | 18,640 |
| Carlisle | 10,916 |
| Carnegie | 11,516 |
| Carrick | 10,504 |
| Chambersburg | 13,171 |
| Charleroi | 11,516 |
| Chester | 58,030 |
| Coatesville | 14,515 |
| Columbia | 10,836 |
| Connellsville | 13,804 |
| Dickson City | 11,049 |
| Donora | 14,131 |
| Dubois | 13,681 |
| Dunmore | 20,250 |
| Duquesne | 19,011 |
| Easton | 33,813 |
| Erie | 93,372 |
| Farrell | 15,586 |
| Greensburg | 15,033 |
| Harrisburg | 75,917 |
| Hazleton | 32,277 |
| Homestead | 20,452 |
| Jeannette | 10,627 |
| Johnstown | 67,327 |
| Lancaster | 53,150 |
| Lebanon | 24,643 |
| Mahanoy City | 15,599 |
| McKeesport | 45,975 |
| McKees Rock | 16,713 |
| Meadville | 14,568 |
| Monessen | 18,179 |
| Mount Carmel | 17,469 |
| Nanticoke | 22,614 |
| New Castle | 44,938 |
| New Kensington | 11,987 |
| Norristown | 32,319 |
| North Braddock | 14,928 |
| Oil City | 21,274 |
| Old Forge | 12,237 |
| Olyphant | 10,236 |
| Philadelphia | 1,823,158 |
| Phoenixville | 10,484 |
| Pittsburgh | 588,193 |
| Pittston | 18,497 |
| Plymouth | 16,500 |
| Pottstown | 17,431 |
| Pottsville | 21,876 |
| Punxsutawney | 10,311 |
| Reading | 107,784 |
| Scranton | 137,783 |
| Shamokin | 21,204 |
| Sharon | 21,747 |
| Shenandoah | 24,726 |
| Steelton | 13,428 |
| Sunbury | 15,721 |
| Swissvale | 10,908 |
| Tamaqua | 12,363 |
| Uniontown | 15,692 |
| Warren | 14,256 |
| Washington | 21,480 |
| West Chester | 11,717 |
| Wilkensburg | 24,403 |
| Wilkes-Barre | 73,833 |
| Williamsport | 86,198 |
| Woodlawn | 12,495 |
| York | 47,512 |
| **RHODE ISLAND.** | |
| Bristol | 11,375 |
| Central Falls | 24,174 |
| Cranston | 29,407 |
| Cumberland | 10,077 |
| East Providence | 21,793 |
| Newport | 30,255 |
| Pawtucket | 64,248 |
| Providence | 237,595 |
| Warwick | 13,481 |

| Cities. | 1920. |
|---|---|
| West Warwick | 15,461 |
| Woonsocket | 43,496 |
| **SOUTH CAROLINA.** | |
| Anderson | 10,570 |
| Charleston | 67,957 |
| Columbia | 37,524 |
| Florence | 10,968 |
| Greenville | 23,127 |
| Spartanburg | 22,638 |
| **SOUTH DAKOTA.** | |
| Aberdeen | 14,537 |
| Sioux Falls | 25,176 |
| **TENNESSEE.** | |
| Chattanooga | 57,895 |
| Jackson | 18,860 |
| Johnson City | 12,442 |
| Knoxville | 77,818 |
| Memphis | 162,351 |
| Nashville | 118,342 |
| **TEXAS.** | |
| Abilene | 10,274 |
| Amarillo | 15,494 |
| Austin | 34,876 |
| Beaumont | 40,422 |
| Brownsville | 11,791 |
| Cleburne | 12,820 |
| Corpus Christi | 10,522 |
| Corsicana | 11,356 |
| Dallas | 158,976 |
| Del Rio | 10,589 |
| Denison | 17,065 |
| El Paso | 77,543 |
| Fort Worth | 106,482 |
| Galveston | 44,255 |
| Greenville | 12,384 |
| Houston | 138,076 |
| Laredo | 22,710 |
| Marshall | 14,271 |
| Palestine | 11,039 |
| Paris | 15,040 |
| Port Arthur | 22,251 |
| Ranger | 16,205 |
| San Antonio | 161,379 |
| Sherman | 15,031 |
| Temple | 11,033 |
| Texarkana | 11,480 |
| Tyler | 12,085 |
| Waco | 38,500 |
| Wichita Falls | 40,079 |
| **UTAH.** | |
| Ogden | 32,804 |
| Provo | 10,303 |
| Salt Lake City | 118,110 |
| **VERMONT.** | |
| Barre | 10,008 |
| Burlington | 22,779 |
| Rutland | 14,954 |

| Cities. | 1920. |
|---|---|
| **VIRGINIA.** | |
| Alexandria | 18,060 |
| Charlottesville | 10,688 |
| Danville | 21,539 |
| Lynchburg | 29,956 |
| Newport News | 35,596 |
| Norfolk | 115,777 |
| Petersburg | 31,002 |
| Portsmouth | 54,387 |
| Richmond | 171,667 |
| Roanoke | 50,842 |
| Staunton | 10,623 |
| **WASHINGTON.** | |
| Aberdeen | 15,337 |
| Bellingham | 25,570 |
| Everett | 27,644 |
| Seattle | 315,652 |
| Spokane | 104,437 |
| Tacoma | 96,965 |
| Vancouver | 12,637 |
| Walla Walla | 15,503 |
| Yakima | 18,539 |
| **WEST VIRGINIA.** | |
| Bluefield | 15,282 |
| Charleston | 39,608 |
| Clarksburg | 27,869 |
| Fairmont | 17,851 |
| Huntington | 50,177 |
| Martinsburg | 12,515 |
| Morgantown | 12,127 |
| Moundsville | 10,669 |
| Parkersburg | 20,050 |
| Wheeling | 54,322 |
| **WISCONSIN.** | |
| Appleton | 19,561 |
| Ashland | 11,334 |
| Beloit | 21,284 |
| Eau Claire | 20,880 |
| Fond du lac | 23,427 |
| Green Bay | 31,017 |
| Janesville | 18,293 |
| Kenosha | 40,472 |
| La Crosse | 30,363 |
| Madison | 38,378 |
| Manitowoc | 17,563 |
| Marinette | 13,610 |
| Milwaukee | 457,147 |
| Oshkosh | 33,162 |
| Racine | 58,593 |
| Sheboygan | 30,955 |
| Stevens Point | 11,371 |
| Superior | 39,624 |
| Waukesha | 12,558 |
| Wausau | 18,661 |
| West Allis | 13,765 |
| **WYOMING.** | |
| Casper | 11,447 |
| Cheyenne | 13,829 |

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